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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, JANUARY, 1849. VOL. VI.—No. 1.

Sketches of Farms.

The Farm of the Hon. Daniel Webster.

EDITORS OF THE CULTIVATOR—In the month of October last, I spent a day upon Mr. WEBSTER's farm, at Marshfield, in Plymouth county, Mass., and although I was not so fortunate as to find him at home, my disappointment was much lessened by the polite attentions of MRS. WEBSTER; attentions which good sense and genuine hospitality ever suggest. Mrs. Webster evidently takes a lively interest in agricultural improvements,—as all *farmer's wives* should do,—and the general cardinal principles of good farming are, with her, familiar topics. I shall not be able, at this time, to speak of Mr. Webster's farming, with that particularity which I could wish; but promising myself the pleasure of accepting his polite invitation to repeat my visit in the spring, at a time when he may be at home, I shall hope to make further comments with more minuteness.

As a Statesman and Orator, Mr. WEBSTER is thoroughly known, at home and abroad; but it is not, perhaps, so generally known that he adds to the other branches of his extensive and varied knowledge, a thorough acquaintance with the practical principles of Farming. Indeed, upon this subject, he is as much at home as upon any matters of law or state in which he is so much distinguished; and nothing affords him more true pleasure than the personal supervision of the farming operations on his estate, and social and familiar discussion of the principles of good husbandry with his brethren of the plow. He retires from the noise and bustle of the world, and the wearing duties of public life, during a winter at Washington, to his pleasant and modest country seat, with much delight; and here—the affairs of State all laid aside, and his mind let down to the humbler, but more genial concerns of husbandry and domestic life—no man can be more easily approached. Here, he is ever ready to impart or to receive information upon practical matters of common life; and none can be more cheerful and familiar in all that pertains to agreeable companionship, than the yeoman,—the Farmer of Marshfield.

The farm of Mr. WEBSTER consists of some twelve to fifteen hundred acres, over two hundred of which are in an improved state of tillage, and the remainder is salt-marsh, pasture and wood-land. The estate is made up of several smaller farms, with the buildings still remaining, which are leased to the men in his employ, the whole being among the oldest settled lands in New England. The soil generally, in this region, is a thin sandy and gravelly loam, resting upon a loose and porous subsoil; and those portions that still remain in an unimproved state present, after the drouths of summer commence, a brown and most sombre appearance. Plymouth county, at best, has a stern and hard soil; and much of the land has not apparently, been improved by the long course of wearing tillage it has received. Mr. WEBSTER has directed the attention of his neighbors near the sea-board, to a more full appreciation of the rich fertilizing treasures which the ocean affords, for the melioration of their light, hungry lands, and no doubt improvement will be seen in consequence.

The mansion-house, a little elevated, is situated in the midst of an extended and richly diversified plain, with a somewhat broken surface. In a westerly direction, this plain rises gradually, terminating in a hill of considerable altitude, which commands a full and charming view of the whole estate. In the opposite and easterly direction, it lies open to the sea, affording from the house, a fine view of the ocean's broad expanse, from which it is distant about a mile. The house stands back some forty rods from the public road, and is approached by a broad avenue, lined with a flourishing and well-trimmed hedge, and a variety of forest and ornamental trees, mostly planted by the proprietor's own hand. It is of two and a-half stories, with a broad and tasteful piazza on two sides, the borders of which are ornamented with climbing and ornamental shrubs. The upright part of the mansion was built by a man of wealth some 70 or 80 years ago To this Mr. WEBSTER has since added a spacious library-room in the rear. Here may be found the thoughts of gifted minds of past ages, as well as the choicest productions of the present time. There are several fine pictures in the room, among which were noticed full-length paintings of Mr. WEBSTER and Lord ASHBURTON. This Library, with its countless volumes, struck us as worthy of its owner;—a fitting place for the retirement of his noble mind, where it could commune with the choicest thoughts of other gifted men, or carry on its own peculiar work of great thinking. There has been no effort at display, either within or without the mansion; but the whole has an appearance of comfort and convenience, reminding the visitor, as some one else has well remarked, of Cicero's description of a house fit for the residence of a distinguished and respected character:—"It is neither small, mean, or sordid, nor enlarged with profane and wanton extravagance."

The barns and other out-buildings are well and durably constructed, and very conveniently arranged. The most unexceptionable neatness and good order prevail in every department at the barns.

Mr. Webster purchased this estate, and commenced his improvements, about fifteen years years ago; the land then being in low condition, and affording but scanty harvests, the result of a wearing husbandry, almost from the landing of the pilprims. He now cuts over two hundred tons of upland hay, besides a large quantity of salt-marsh. His pastures support about one hundred head of cattle, and some sheep. The brown and dry knolls have many of them been covered with a lively green, by an improved tillage.

Improvement of Pastures.—It appears to have been a favorite object with the proprietor, to improve his pasture lands; thereby increasing the amount as well as the quality of the feed. Much of this soil is naturally very light and thin, and the surface being quite broken into knolls, the land, in its unimproved state, evidently suffers severely from drouth. He has been constantly and steadily progressing in the improvement of the pastures, and now many of them afford fine ranges for the stock. These improvements have been made in a variety of ways. Buckwheat, and other green crops have been somewhat used, with good results; but the main dependence has been upon the rich fertilizing materials afforded by the sea. The kelp-weed, of which I shall presently speak, possesses wonderfully enriching power on these light soils. The fresh appearance of the knolls, which have been covered with a verdant herbage by the application of kelp, in contrast with those which still retain their brown and seared surface, is quite pleasing to the eye of the observer, as it no doubt is to the taste of the cattle. The menhaden fish have also been largely used on these lands, and some of them, which were dressed with this fish several years ago, still maintain a thick and superior herbage.

I noticed a pasture-field of several acres, embracing a high and dry knoll, with little or no feed of much value upon it, which was under a course of improvement. A very heavy coat of swamp-muck had been hauled on to the field, sometime previously, from a swamp close by, and heaped out for spreading. It had in this state been exposed to the action of the atmosphere sufficiently long to become very dry and crumbling. The muck was spread over the surface and plowed in, and the field sown to rye and grass-seeds, the rye to be fed off by the stock. I noticed that upon an adjoining field, which had been similarly managed, the grass was very good. In fact, there was more value of forage upon one acre than upon four acres of the first mentioned field. In the old and thickly settled portions of our country, the pastures have been much neglected and worn; the prices they command are comparatively high; the price of pasturage is also high; and hence improvements in this department of farming are as valuable and desirable as in almost any other.

Cultivation of Forests.—Mr. Webster takes much pains in promoting the growth, and increasing the number and variety of forest-trees. The forests that were growing at the ime of his purchase, have been carefully preserved, and a great number and variety of other American forest-trees have been planted by him, many of which are now quite thrifty and sizeable, affording abundant proof of the utility and eventual profit of a careful attention to this branch of good husbandry. The example Mr. Webster has given is most commendable, and any intelligent visitor at Marshfield, witnessing the thrifty growth of these young trees, cannot fail to be impressed with the fact that this matter has been too long and too generally neglected.

The Stock.—About thirty swine, of all ages, are kept here. They are of the Mackay breed, in all its purity; and are among the best specimens of this favorite breed to be found in New-England. Among others, I particularly noticed his old boar. He is thirteen years old, a fine stock getter, and has been carried into almost every county in the State. An old breeding-sow, with 12 snow-white pigs of very uniform size, also atttracted my attention. Mr. Webster is also raising a pair of Suffolk pigs, in order to test the qualities of that breed.

Mr. Webster has imported some fine cattle of the Ayrshire, Devonshire, and Alderney breeds, and is observing the comparative merits of each. His stock of Ayrshires, of all ages, is quite numerous, and probably they are not excelled by any equal number in the country. He esteems them highly as a dairy-stock for the New-England soil and climate, and his cows of this breed are excellent milkers. Mrs. Webster informed me, however, that the Alderney cow surpassed all others for the rich quality of her milk; that the cream can be churned into butter in a very few minutes, and being of too deep an orange color to look well on the table, the milk of this cow is usually mixed with that of three or four others, perceptibly coloring the whole. She does not give as much milk, however, as either of the Ayrshire cows.

He has a fine young bull of the Alderney breed, and has for experiment coupled him with some of the Ayrshire cows this year. He has an old Devonshire bull and many grade-cattle and steers of his get, which are esteemed highly for the yoke. A promising bull-calf of this breed was also noticed, and a Durham cow of remarkable capacity as a deep milker. The farmer of Marshfield is not to be beaten by any other farmer, in the number and fine majestic appearance of his working oxen, of which he keeps several yoke for the business of the farm. Twenty-five steers were noticed in one lot, which have recently come down from his old farm in New -Hampshire. Mr. Webster has any quantity, and a great variety of poultry and water fowl, ann ponds of water for them.

He takes great delight among his cattle; and the progress of each animal is carefully observed and well known by him. Before leaving the farm in the autumn to engage in the duties of public life, he usually has all the cattle brought up to the barns, and each animal put into its stall, which is numbered, and of which a memorandum is taken. His head farmer keeps him informed, during the winter, of the state and progress of the stock and other matters, and if any particular animal is mentioned, he knows all about him at once.

Manure.—In addition to the bountiful supply of manure made by the numerous stock, the sea also affords a large amount of valuable material for the improvement of the soil and crops. The sweepings of the marsh, so called,—which are composed of a variety of vegetation from the marsh and the sea, the most valuable of which is the rock-weed,—are brought in by the tide-and deposited in winrows on the margins of the upland. They are gathered up, at different times, and deposited in the barn-yards and piggery. Swamp-muck and mud and turf from the ditches in the marshes, are also carted into the yards during summer, and the whole mixed up with the manure-droppings by the treading of the stock. The hay cut upon the marshes is profusely used for littering the yards and sheds during the foddering season. The barns are not conveniently located for cellars, and the planks of the stable-floors are therefore laid with an opening of three-fourths of an inch, and muck or loam thrown under the stables in the fall to the depth of two or three feet, in order that nothing shall be lost. Large quantities of the menhaden fish are taken in the seine, and either composted with muck and other material, or spread directly upon the land as a top-dressing for grass, or plowed in for hoed crops.

Use of Kelp.—But one of the most interesting matters pertaining to Mr. Webster's farming, is the systematic and extensive business of collecting and using kelp. Until he commenced farming, the value of this plant, as a fertilizer of the soil, was not at all appreciated in this region, although thousands of tons of it were annually thrown upon the shore, to be decomposed and again washed away into the ocean. He estimates one load of it to be equal, in the power of production it imparts to the land, to three loads of ordinary farm-yard manure. It gives me pleasure to add, in this place, an extract from a letter just received from J. P. **Norton**, Esq., professor of Agricultural Chemistry in Yale College, in answer to some inquiries of mine as to the nature and constituent parts of this sea-weed, and it will readily be seen from his description, why this substance is so valuable to the farmers on the sea-coast:

"The name *kelp* does not, as I understand it, apply to any particular kind or class of sea-weeds, but to the ash which is left when they are burned. This ash was formerly made in great quantities, on the northern coast of Scotland, for the purpose of glass making, and sold often under the Spanish name of 'barilla.' Carbonate of soda is now so cheap that the kelp is chiefly applied to the land, and for this purpose brings £3 (about $15,) per ton. It contains a large proportion of the alkalies, potash and soda, much sulphuric acid, and generally a good proportion of phosphates; also, of course, common salt. It is therefore a very valuable manure. The organic part contains much nitrogen, besides a species of mucilage, and, in some varieties, a kind of sugar. In the Lothians of Scotland, a right of way to to the sea-coast to gather sea-weed, increases the rental of a farm, to the extent of five or six dollars per acre."

The particular substance which Mr. **Webster** calls kelp, is a plant growing in shallow water and rooting upon the stones, the stalk being four to five feet long, with a long and broad leaf. It is a very gummy plant, of a greenish appearance. A strong wind, blowing from the eastward, drives great quantities of it on to the beach, depositing it in large winrows at high water mark. Immediately after one of these blows, all the force of the farm, of men and teams, is set at work in hauling it to the uplands. It is spread directly from the cart, and mostly plowed under the soil, for hoed crops, without any delay. But when taken at intervals inconvenient and unseasonable for turning under for this purpose, it is either spread as a top dressing on the mowings, or used in fertilizing the pastures. Its best effects are realised when plowed in for hoed crops.

It is necessary to secure the kelp very soon after it is deposited on the beach; for if left in a pile, a powerful fermentation commences, and the next high water carries it out beyond reach. There is no particular rule observed as to the quantity used, the ground being covered with as much as can be turned under, by the plow. A short time previous to my visit at Marshfield, there had been one of these heavy easterly winds, and the kelp thrown on shore had been carted to a field of several acres of sward-land, and plowed immediately under the sod. Several teams were engaged in hauling it from the beach, and others in plowing it in; all hands working with all their might, and Mr. **Webster** as much engaged in the matter as any body. The field is intended for corn next season.

The Crops.—Mr. **Webster** goes largely into the cultivation of the various root crops. His potatoes, of of the Pinkeye and Mercer varieties, are as fine as I have seen for years. They are very smooth and fair, and have grown to a large size, without any indications of disease. In fact, I was informed that they are not affected with the rot, when planted on his light, loamy soils, and manured with the kelp. It is an admirable dressing for the potato; possessing great power as a fertilizer, without any tendency to produce the fatal disease which is of late years always sure to attack this root when heavily dressed with animal manure.

A field of turneps, of ten or twelve acres, and adjoining it, five or six acres of mangel wurtzel and sugar beets, were noticed. Here again the advantage of the kelp, as a dressing for these succulent crops, was at once apparent, not only in the luxuriant growth imparted to them, but also in the entire absence of all weeds from the soil; for, unlike manures from farm-stock, the material taken from the sea, brings with it no weeds to the soil, and the labor of cultivation is therefore materially lessened.

The corn crop is good, averaging, I should judge, over 60 bushels per acre. The crop of hay is abundant, the season having been most favorable for grass, and over 200 tons of upland hay have been gathered into the barns. I noticed that a good deal of grass is cut here, called "black grass," which grows on the margins, between the uplands and salt marshes, and is highly esteemed as forage for the stock. I was informed that it does not flourish in any other locality. The marshes yield a heavy burden of hay, and some of it makes very fair winter fodder, but the most of it is profusely used in bedding the stock and littering the yards and sheds during the winter. The barns are full, and an abundance of the requisite materials is at hand, for carrying the numerous stock through the foddering season, in fine condition.

In closing this communication, it gives me pleasure to remark, that the importance and the improvements of agriculture have, from early college days, been a favorite subject with Mr. **Webster**; and he has ever, both by precept and example, shown that he regards the cultivation of the soil as the highest and most ennobling employment of man.

Hear his own remarks in this connection:—

"Agriculture feeds us; to a great extent it clothes us; without it we could not have manufactures, and we should not have commerce. These all stand together, but they stand together like pillars in a cluster, the largest in the centre, and that largest is agriculture. Let us remember too, that we live in a country of small farms, and freehold tenements; in a country in which men cultivate with their own hands, their own fee simple acres; drawing not only their subsistence, but also their spirit of independence and manly freedom from the ground they plow. They are at once its owners, its cultivators and its defenders. And whatever else may be undervalued, or overlooked, let us never forget that the cultivation of the earth is the most important labor of man. Man may be civilized, in some degree, without great progress in manufactures, and with little commerce with his distant neighbors. But without the cultivation of the earth he is in all countries, a savage. Until he stops from the chase, and fixes himself in some place, and seeks a living from the earth, he is a roaming barbarian. When tillage begins, other arts follow. The farmers, therefore, are the founders of human civilization."

We often hear the clamor of 'book-farming,' 'gentlemen farmers,' &c., &c., raised against the men of wealth, or of gifted mind, who engage in farming, from a natural taste that way, and a desire to promote improvements. It usually proceeds from ignorance or a narrow mind. No man of sense or intelligence ever joins in this clamor; keeping his own operations within the limits of his means, he is readily convinced upon reflection, that to this same class of citizens, agriculture has been largely indebted, in all countries and in all ages. F. **Holbrook.**

Brattleboro,' Vt., Nov. 24, 1848.

Ashes on Grass.—S. R. Gray, of Salem, N. Y. sowed in the autumn of 1845, 25 bushels of unleached ashes on two acres of meadow, on a western hill-side, which had been mown for thirty years. The crop of hay was increased from half a ton per acre to a ton, and the second year to a ton and a quarter

Suggestions for Farmers.

"To Improve the Soil and the Mind."

THIS was the motto adopted by the lamented BUEL to express the design of our work. Though the words are well chosen, perhaps the object might be more distinctly told by a transposition of them, inasmuch as a proper improvement of the mind of the farmer, seems naturally to constitute an important step towards the improvement of the soil.

By a proper improvement of the mind, we mean, in this case, the acquirement of such knowledge as will better enable the farmer to understand and prosecute the business of his profession—knowledge which shall bear the same relation to his vocation, as that which is possessed by the physician, the merchant, and the mechanic, bears to their pursuits.

The idea, we trust, is not now very extensively held, that little or no intelligence is necessary to direct. rightly, the operations of agriculture; though we fear the supposition is too frequently indulged, that the circumstances in which farmers are placed, are unfavorable to mental energy and the culture of the mind. It is admitted that *severe* bodily labor is prejudicial to the exercise of the mental faculties; but we are confident that the organs of both mind and body are developed and strengthened by a due degree of muscular exercise. Hence the circumstances best calculated to improve the condition of the farmer, are those which call into proper action the intellectual and physical powers with which he is naturally endowed.

But there are now, fortunately, many farmers in our country whose labors are not so constant as to interfere with the improvement of their minds; many, indeed, are *thinking* and *reading* men; and we are forced to conclude that it is more from lack of inclination than the existence of real obstacles, that the class is not more numerous. The long winter evenings and stormy days, afford many hours of leisure, during which a great amount of useful information might be gathered.

To show that manual labor is not incompatible with high mental capacities, it is not necessary to go back to ancient times—when

> ———— "the sacred plow employed
> The kings and awful fathers of mankind."

The names of distinguished individuals of our own country may be given as examples of the fact. PICKERING, BUEL, HARRISON and WRIGHT, were accustomed to the practical labors of the field; and if we look, now, into our halls of legislation, either for the different states, or the nation, we shall find, among the sensible, sound-minded, and influential members, a fair representation of *working* farmers.

We have spoken of that kind of knowledge which is to assist the farmer in his business, and the question naturally arises, how can this knowledge be most readily obtained? We answer, by observation, by conversation with, and by reading the writings of each other. But while we would urge the importance of inquiry, we would by no means advise a credulous assent to every story which may be heard or read. The mind of the farmer should be so enlightened that he may be capable of judging for himself, and by a careful discrimination, be able to select what is really useful and *applicable to his peculiar wants*. It is only by observation, by reading, study, comparison and reflection, that this important faculty of discrimination can be acquired.

In recommending to farmers the reading of agricultural books and periodicals, we would not be misunderstood as to what we consider the proper office of such works. They should be regarded as *aids* to experience and practice. "They furnish hints," says a sensible writer, "which intelligent men may turn to great advantage, by trying them first on a small scale, and altering them to suit their particular circumstances; they inform us of the progress of our art in various districts; they refresh the memory, brighten the intellect, and improve the mind; they are vast stores of *facts*, from which many useful lessons may be learned by the studious farmer."

But though we deem it the first duty of the farmer to make himself acquainted with the business of his profession, we would not restrict his mind to one class of subjects. The pleasures of the imagination, and even the cultivation of a refined taste, are not beyond the sphere of persons in rural life. The favorite bard of Caledonia, who was proud of the appellation of "Ayrshire Plowman," composed many of his best pieces while holding the plow—a favorite employment with him.

JAMES HOGG, the "Ettrick Shepherd," became widely known on account of his poetical effusions, while tending sheep on the Scottish mountains; and his prose writings, penned under similar circumstances, relating to the management of those animals, are among the most valuable we have on that subject.

GILBERT BURNS, a brother of the poet, distinguished as a man of sound sense and extensive information, in a letter to Dr. Currie, respecting the propriety of educating the middling and lower classes, combats with great force the idea that the exercise of the mind is inconsistent with the employment of the hands. He observes—"I can say from my own experience, that there is no sort of farm-labor inconsistent with the most refined and pleasurable state of the mind, that I am acquainted with, thrashing alone excepted." The primitive mode of performing that kind of work, he regarded as "insupportable drudgery;" and he suggested that the man who invented the thrashing machine, deserved a "statue among the benefactors of his country, to be placed in the niche next to the person who introduced the culture of potatoes."

The happiness which may be derived from a contemplation of the beauty and harmony of nature, as evinced in the laws which govern the mineral, vegetable, and animal kingdoms, constitutes one of the strongest incentives to investigation and the pursuit of knowledge; and in this respect, none have greater opportunities than the farmer, who—

> "To Nature's voice attends, from month to month
> And day to day, through the revolving year;
> Admiring, sees her in her every shape,
> Feels all her sweet emotions at his breast."

Order and System in Farming.

The improved condition of Agriculture in the state of New-York, is evident in nearly every county, it is made apparent in the products which flow in abundance to our seaport markets, and it is equally apparent on the whole face of the state. Science has industriously collected the fragments of agricultural knowledge, heretofore scattered over this and other countries. and having arranged them with system, we are enabled readily to retain and to employ them.

With advantages so great, it is surprising to notice the embarrassment and loss, which are permitted to harrass and distract a large number of our most industrious farmers, an embarrassment which neutralises their efforts, and holds back from them much of the profit their farms would naturally afford.

It is the absence of *Order* and *System* in their proceedings, to which allusion is made; a palpable want of arrangement of facts, of principles, and of objects, to form a complete whole.

At this season of the year, (November,) we are forcibly reminded of this truth; the neglected corn, still standing on the field—the rich soil intended for spring crops, resting under a covering of mischievous weeds; the new grown wheat plant suffering already in stagnant waters, for want of proper drains or furrows; the plow and the harrow, resting on a soft and muddy headland, there to remain exposed to the winter storms; the fine wooled sheep hurrying over a long fed pasture, snatching a scanty meal, while an adjoining field exhibits a bountiful supply; abundant hay stacks far from the barns and sheds, around which the sheep cluster in snowy weather, exposed and shivering; such, and such like negligences are, every where too often to be seen, in this our beautiful state—negligences arising from a want of *system* and *order*, and for which an easy remedy exists, when the suffering party can be convinced, that he not only loses a portion of the moneyed benefit he seeks for, but also loses in the estimation of his fellow-citizens, who view with silent regret the slovenly aspect of his farm, the want of *order*, and the loss of natural advantages for want of *system*.

It was Burke who said, that "good order is the foundation of all good things;" and as farmers we may be assured, that a want of *order* in our farming operations, and a want of *system* in our course of cultivation, must and will display a confused mind,—a mind without a steady object, relying on chance, dependent on accident, causing a loss of many "good things."

The season is now at hand when all our out-door operations cease; in fact, the systematic farmer *has* closed his field labor for this year, except perhaps ditching, or the removal of stumps and stones. Now is the season to reflect, and establish a *system* for the coming year, and by a judicious arrangement of crops and field work, have or cause each to follow in an order, admitting of no hurry or anxiety for its due and thorough accomplishment; this, generally may and can be done, and the man who omits it cannot run an equal race with his better informed and careful neighbor.

No excuse or apology can be found for the want of order; it does not require talent or skill, neither does it consume time; while its exercise causes every thing within its influence to be ready for action, agreeable to the eye, enduring in existence, and fitted to produce the required results without failure.

Neither can any man be excused for a want of system, no, no more than ignorance can be tolerated in this state, where such abundant sources of knowledge are freely proffered. 'Tis true, that *system* requires effort of mind, and so does every vocation whereto man is called, if he would perform his whole duty. None on this earth have more need for the exercise of mind than we who cultivate the soil; every department of science is embraced in a proper fulfilment of our duties, and so wide-spread and essential are the claims upon our minds, that without system no man should enter upon a farmer's life; without system he cannot succeed; he may draw out a toilsome existence, but he cannot accumulate wealth and be truly prosperous, independent and happy, unless SYSTEM guides every project, and ORDER presides over every department of his farm. AGRICOLA. *Seneca Co., N. Y., Nov*, 1848.

Agriculture and the Agriculturist.

I remember to have seen it asserted something to this effect, by the late John Quincy Adams, that "if there was one business, profession, or calling, that was more independent than another—one that could be strictly called more noble—it was agriculture." And this was doubtless true. Agriculture is the great centre around which all the other occupations of society revolve. Trade, commerce, manufactures—even the learned professions, owe their welfare to agriculture. Look at it from any point of view we may, the farmer, simple homespun name as that has become, wields a tremendous influence over society. Little does that man who is quietly cultivating his potato patch, or hoeing his corn-field, think of the importance of his calling. He is a part of a great whole that, to do without, would be to bring dearth and famine upon the land. Such is agriculture; and yet we often hear men complaining of it as a dull, monotonous occupation—that it is destitute of the excitement and profits of trade—that farms, as a general thing, do not pay more than four per cent. interest—that it is a life of almost unremitted physical exertion. To examine partially into these objections urged against agriculture, is the object of the present article. That some, or all of them, may, at first sight, appear true, is very possible; but I am very well convinced that a few moments' reflection will set matters in their true light.

Is farming a dull, monotonous occupation? I answer, no. To him whose only ambition is to become a good plowman, or to learn to do any of the merely mechanical parts of agriculture, in order to gain his daily bread—to him who has never said to himself, "I wish to improve my mind as well as my soil," agriculture may indeed be dull. But to that man who has entered upon it with nobler and loftier views—who, finding himself in the great laboratory of nature, sets himself at work with hand and mind to explore the hidden depths of earth—to him who unites scientific research to practical experience—who with a master mind turns everything upon his farm to good account—to him who is not weary in well-doing, but through difficulties and trials presses onward—to such a man, I say, agriculture offers a noble field for the exercise of mind. While he holds the plow with his hands, his head is at work; he thinks—he plans—the hours fly swiftly away, for his mind is working as well as his body.

Is agriculture destitute of the excitement and profits of trade? Many will answer yes—but for my own part, I can find excitement enough in agriculture for my taste. In the changing seasons—in the calms and the storms—in the drouth and the deluge—in the influence of weather on crops—there is enough for the exercise of hope and fear. As to profit, when we consider that it has been pretty clearly ascertained that out of every hundred persons engaged in business, more than eighty fail during a period of fifteen or twenty years, I feel warranted in saying that in the end, considering the amount of capital invested, the profits of agriculture are at least equal to those of mercantile pursuits.

Do farms generally only pay four per cent. interest? If so, how is it that so many men buy a farm, pay down one-third or one-half—leave the remainder on bond and mortgage, at six or seven per cent.,—pay their interest—support a family, consisting of a wife and three or four children—keep their farms and buildings in good repair, and eventually pay off the whole amount due. This is not an uncommon case. Many have a very loose way of calculating what a farm produces. They *live* from their farms, taking no account of what they get from it for family use, and only considering what they sell as what their farms have produced.

Let a man with a small family have four thousand dollars invested in a farm; could he not live better upon that sum thus invested, than he could with the same amount invested at seven per cent. interest? No one can hesitate in an answer to this question.

As to the hard work of agriculture—I glory in it. In these days, when men are turning and twisting and using every subterfuge to escape from labor, and live by their wits, I welcome that calling that brings man to acknowledge the great law of God and of nature—that of labor. Excessive labor, whether physical or mental, is injurious; but rational labor is a blessing, and not a curse. That some men do not labor enough, and that others labor too much, is the fault of a corrupt state of society, not of their calling or occupation.

There is one thing against which I would caution my fellow farmers, and especially, my fellow *practical* farmers, and that is, never to suffer their minds to run wild while they are bestowing such care on their farms. Depend upon it, science and agriculture must go hand in hand. Science will aid you much, and save you from much of that unremitting physical exertion of which you sometimes complain. Free yourselves from those prejudices against book-farming which many of you have read, and ponder well what you read, and it will not be long before your calling, which has been too much neglected from your own indifference, will rise to its true height. H. C. W. *Putnam Valley, N. Y., Nov.* 30, 1848.

The Veterinary Department.

Ticks on Sheep.

Ticks are a great annoyance to sheep. The itching they produce causes the sheep to rub themselves against fences and other objects, and to scratch and bite themselves with their teeth, in doing which they pull out their wool, and mat and injure that which is left on the body. The best course to prevent the increase of ticks, is to wash the lambs in a decoction of tobacco, three or four days after the sheep have been shorn. The ticks, being deprived of protection on the sheep, resort to the lambs, where they find suficient covering in the young wool.

But if, from the want of proper precautions, the flock is found affected with these vermin in winter, or while the wool is long, the best mode of destroying them is by fumigation. Take a canister, of copper or sheet-iron, made at one end to fit the pipe of a bellows, and having at the other end a small pipe for the escape of the smoke. Fill the cannister with tobacco, put in a coal of fire, and fasten the canister to the bellows-pipe, around which there should be some damp tow to make it fit tight. The wool should be opened in lines or furrows around the body, from six to eight inches apart. As the wool is opened the pipe or canister should be applied close to the skin, the wool immediately closed around, and slightly compressed at the surface with the hands, and at the same time a puff given with the bellows. This will keep the smoke close to the body. The work may be done very expeditiously, and with due attention, nearly every tick will be killed.

Hoof-ail in Cattle.

This disease, sometimes called "foul in the foot," is most common in open winters, or when cattle are obliged to travel or stand much in mud. It is known by lameness, soreness between the claws of the foot, with inflammation, and in advanced stages, discharge of fetid matter, which issues from between the hoof and the foot. A separation of the hoof after a while takes place, and if the disease is not checked the hoof sometimes comes off. Though the disease, like foot-rot in sheep, is believed sometimes to originate sponstaneously, there is good reason to believe that it is contageous; and on this account, an animal, as soon as it is affected, should be kept by itself. The best remedy, if used when the disease first manifests itself, is blue vitriol, or sulphate of copper. First wash the foot in strong soap-suds, and then apply the solution of vitriol to the affected part, twice a day. If the disease is of long standing, the hoof should be pared away from the upper edge, the offensive matter taken out as thoroughly as possible, and an ointment of corrosive sublimate and lard applied. The animal should be kept from wet, and if the foot is much sore, it should be protected by a bandage of strong cloth.

Diseases of Swine.

Itch or Mange.—Swine often suffer greatly from this disease. In its worst stages, the skin becomes almost an entire sore, and the animal is distressingly irritated by the inveterate itching. It constantly rubs itself, becomes poor, and if not relieved, dies. An ointment of lard and sulphur, if thoroughly applied all over the body, and rubbed in, will generally cure the complaint. It is well to give sulphur with the food also.

Quincy or Sore-Throat.—Cole, in the "Veterinarian," directs to give for this disease,—"Half a pint of molasses, a table-spoonful of each of hog's lard and sulphur, and a tea-spoonful of cayenne or black pepper. Melt, and mix all together, and when just cool enough, pour down the throat, unless you can make him eat it in light food."

Diseases of the Horse.

Broken Wind is a disease with which horses are affected. The air-cells of the lungs become ruptured, from various causes, and respiration is labored and irregular. "The cure of a broken-winded horse," says Youatt, "no one ever witnessed, yet much may be done by way of palliation. The food of the animal should consist of much nutriment condensed into a small compass; the quantity of oats should be increased and that of hay diminished; the bowels should be gently relaxed by the frequent use of mashes; the water should be given sparingly through the day, although at night the thirst of the animal should be fully satisfied; and exercise should never be taken when the stomach is full. It will scarcely be believed how much relief these simple measures will afford the broken-winded horse, and of how much exertion he may be gradually rendered capable. Carrots are very useful to the broken-winded horse, not only as containing much nutriment and considerable moisture, so that less water may be required, but from some property they possess rendering them useful in every chest affection. A broken-winded horse turned out to grass, will never improve, on account of the almost constant distention of the stomach."

Neurotomy.—S. A. Barker, of McConnellsville, Ohio, says that "the operation of Neurotomy, as described in Skinner's Youatt, has in every instance, in this part of the country, proved fatal. Thousands of dollars worth of horses, operated on, have been lost." (The operation consists in cutting certain nerves from the foot of lame horses, and though producing at the time apparent relief, results ultimately in the destruction of the foot.) S. A. B. states, "in June, the hoofs of some of the horses operated on, literally rotted off, while the animal, insensible to pain, continued to stamp the lacerated and denuded stumps on the ground, to drive away the flies, which bit it above the point operated on."

Strained Shoulders in Horses.—The following is a good embrocation for strains: Spirits of turpentine, half a pint; oil of origanum, half an ounce; olive oil, a pint and a half; cantharides, one ounce. Mix together; keep it in a bottle; shake it often; apply it to the affected part, and rub it in, morning and night.

Different Species of the Ox.

Aurochs, or European Bison.

Of animals belonging to the genus *bos*, or ox, several distinct species exist; other species have passed away and are only known from history or their remains, which are found in various parts of the world. Of the latter class may be mentioned the *urus*, a huge animal which once inhabited the wilds of Europe, and was described as little less in size than the elephant, with immense horns, and of untamable ferocity. This race has been extinct for many centuries. But another species which existed contemporaneously with the urus, called the *bison* or *bonassus*, is believed to be identical with the Lithuanian wild ox, *aurochs* or *zubr*, represented by figure 1. A similar species, or perhaps the same, exists in the Caucasian mountains.

The idea that the ancient urus was the parent of our domestic ox, is now rejected by all naturalists; as is, also the equally untenable theory that the domestic stock is descended from the bison or aurochs. They have wide anatomical differences. The common ox has 13 pair of ribs, the aurochs 14 pair; the lumbar vertebræ of the common ox are 6 in number, those of the aurochs are 5; the front of the common ox is flattened, that of the aurochs is protuberant, and broader in the proportion of three to one; the occipital space between the horns forms an arch, instead of being flat.

1.—AUROCHS, OR EUROPEAN BISON.

The following description of the aurochs is taken from a Treatise on the Ox, by W. C. L. Martin:—"The European bison, once so widely spread, is now confined to the forests of Bialowicza (pronounced Bealawezha) in Lithuania, where it is protected by stringent laws: whoever kills one, without permission of the Russian government, has to pay a fine of 2,000 rubles; or, if unable to meet the penalty, must suffer transportation to Siberia. Formerly the penalty was death.

"This species is wonderfully massive and robust in in its proportions; its withers are thick, and elevated, and covered, as are the neck, sides of the head, and lower jaw, and throat, with long, rough hair, forming a sort of mane beneath the throat, like a beard. This mane is often a foot in length, and is thickest during the winter, especially in old bulls; the hair covering the trunk and limbs is soft and woolly; the tail, which is short, is furnished with a tuft of stiff hairs at its extremity; the eyes are small, but their expression is extremely wild and savage, and when the animal is irritated they glare with fury; the tongue, lips, and palate, are blue. An odour, described as between musk and violets, is exhaled from the skin, and especially that portion which covers the convexity of the forehead. This odour is much stronger in the male than the female, and may be perceived at a considerable distance from the herd. The horns are large, round, and lateral, with the points sweeping upwards and forwards; the head is large and heavy, and carried low. The male aurochs is upwards of six feet in height at the shoulders, and is a most formidable animal; so great is its strength that, according to Dr. Weissenborn, trees of five or six inches in diameter are levelled by the thrusts of a bull. He fears neither the wolf nor the bear, but assails them with horns and hoofs; an old bull is a match for four wolves; and although a pack of wolves may sometimes hunt down a strayed aurochs, the collected herd has nothing to fear from any animal."

It is said that all attempts to obtain a mixed breed between the aurochs and domestic cattle have utterly failed. A great antipathy exists between them; the aurochs shuns the domestic race, and if contact is unavoidable, attacks them with fury and gores them to death.

American Bison, or Buffalo,

Closely allied to the aurochs or zubr, but evidently of a distinct species, is the American bison, *bos Americanus*, (fig. 2.) This animal formerly existed as far to the eastward as New-York and Pennsylvania; but at the present time, it is not found east of the Mississippi river, and its common haunts are to the westward to the base of the rocky mountains. Here they are sometimes seen in herds of twenty thousand. The race is, however rapidly decreasing in numbers, from the indiscriminate slaughter which has for a long time been carried on against them by the hunters, who kill them in vast numbers chiefly for their hides, which form the well-known "buffalo robes" of commerce.

Anatomically considered, the American bison differs more from the common ox than does the European aurochs. The ribs consist of fourteen pair, and the lumbar vertebræ are only four in number. Still, there have been repeated instances of its breeding with the domestic race; but the offspring, so far as we can learn, are invariably barren. Owing to the great breadth of forehead and the hump on the shoulders, the common cow, when impregnated by the bison bull, experiences great difficulty in parturition; but the bison cow readily conceives by the common bull, and brings forth without difficulty. We are not aware that the hybrid stock posseses any superiority over the domestic race.

2.—AMERICAN BISON, OR BUFFALO.

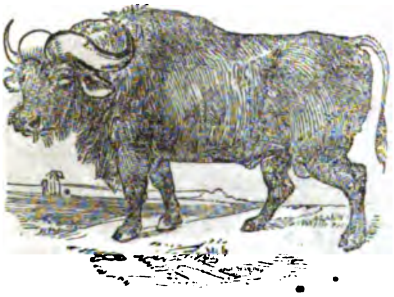
The Musk Ox.

Another species of ox indigenious to North America, is the Musk ox, *ovibos moschatus*. Its habitation is from the 61st to the 75th degree of latitude. It inhabits wild and bleak situations, feeding in winter chiefly on lichens, and in summer on grass. It is not larger in size than the smallest of our domestic breeds. Its flesh, though eaten by hunters and by the Esquimaux, is strongly imbued with musk. It is covered with long wooly hair, which reaches from its sides almost to the ground. The general color is a dark grizzled brown

African Buffalo.

Mr. MARTIN, in the work above referred to, gives the following account of the African or Cape buffalo—*bos caffer*, (fig. 4.) " It is a native of the wilds of Southern Africa, where, associated in herds, it frequents the borders of woods and thickets, and the watered ravines and glens among the hilly grounds. This savage beast is fond of wallowing in pools and swamps, and in the muddy ooze, covering its almost naked but dense hide, with defensive clothing against the attacks of insects. The horns of this species form at their base a solid rugged mass, covering the forehead, from which they bend downwards, and somewhat outwards, gradually diminishing to the points, which suddenly curve upward. The distance between the points of the horns is frequently five feet, but the rugose massive base of each is in contact, forming an impenetrable helmet: their color is black. With these formidable weapons the Cape buffalo has been known to transfix a horse instantaneously, lift him up, and hurl him with crushing violence to the ground. The eye of this animal is savage and lowering, and betokens great ferocity; the ears are large and generally observed to be torn, either from combats among the animals themselves, or from the laceration of spines and thorns, as they force their way through the dense thickets.

3—MUSK OX.



4—AFRICAN BUFFALO

" The Cape buffalo does not exceed the ordinary ox in height, but is much more massively and heavily built, and is a far more ponderous animal, with short thick limbs, and a dense hide nearly destitute of hair; on the lips and throat, however, the hairs are long, rather thickly set, and very coarse.

" Among the natural enemies of the larger quadrupeds, the lion is the only adversary which this beast has to fear; but even the monarch of the desert does not always prove victorious, and instances have occurred in which several buffaloes have united in the rescue of an attacked companion, and gored the foe to death."

In future numbers we shall give further descriptions and illustrations of the different species of the ox tribe, and shall notice various domestic stocks and breeds.

Notices of New Publications.

TRANSACTIONS OF THE AMERICAN INSTITUTE, FOR 1847.—We have received the volume above mentioned, which numbers over eight hundred pages. The matter was chiefly prepared under the supervision of the late secretary of the Institute, T. B. WAKEMAN, Esq. In addition to the usual doings of the Association, the book contains several communications of value from persons in different parts of the country.

MR. COLMAN'S EUROPEAN AGRICULTURE.—Parts nine and ten, which bring this work to a close, have been received. They comprise views of French, Belgian, Dutch, Flemish, and Swiss agriculture; with notices of various agricultural schools, experimental farms, and copious remarks on agricultural education. Most of the subjects are necessarily treated with brevity, owing to the small space in which they are condensed, but a great amount of information, of a practical nature, is given, in a style particularly interesting and attractive. We shall notice the work more fully next month.

SCIENTIFIC AGRICULTURE, or the Elements of Chemistry, Geology, Botany and Meteorolgy, applied to Practical Agriculture. By M. M. RODGERS, M. D. E. Darrow, Rochester, publisher.—This is a book of respectable appearance, embracing 275 pages. It is evidently designed to furnish the rudiments or first principles of the sciences mentioned in the title. It embodies a large amount of useful information on the various subjects brought under consideration. The arrangement appears simple, and though each subject is, necessarily, treated with brevity, the language is generally plain and within the comprehension of common minds. But as the use of technical terms cannot be entirely avoided in a treatise of this kind, a glossary is appended, which affords a ready explanation of any words not likely to be familiar to the general reader. We have not examined the work sufficiently to pronounce in regard to all its details, but are favorably impressed with its general character.

HOLDEN'S DOLLAR MAGAZINE.—See advertisement of this magazine, page 39 of this number. We have never seen the work, but it is highly commended by the press generally.

BRITISH AND FOREIGN MEDICO-CHIRURGICAL REVIEW, or Quarterly Journal of Practical Medicine and Surgery.—This ably conducted periodical ought to be in the hands of every member of the faculty in the country. It contains, also, much that is interesting and valuable to persons not immediately connected with medicine or surgery. With no pretensions to knowledge in the healing art, we can say we have derived great benefit from a perusal of this work, and we should be very unwilling to be debarred from it. It is issued quarterly in London, and re-published in New-York by RICHARD & GEORGE S. WOOD, 261 Pearl-street. Price, $3 per annum. A quarterly retrospect of American practical medicine and surgery, compiled from all the American journals, is issued as a supplement to the *Review*, and is sent *gratuitously* to all subscribers who pay promptly in advance.

AMERICAN PLOWS.—A writer in the (English) *Mark Lane Express*, who had made a thorough trial, side by side, of both English and American, says: "In justice to the American plows, I must say that they cut and turned their furrow quite as well as the others, at the same time breaking the land to pieces, and making a capital preparation for either drilling or dibbling; indeed, they are the most simple, light, strong, and efficient plows, that it is possible to conceive."

The Indian Corn Plant—Zea maize.

Varieties of Indian Corn.

MAIZE or Indian Corn, is undoubtedly an American plant, though we have no positive knowledge in regard to its original habitat. We are not aware that it has ever been found growing in a wild state; but as its spontaneous production could only take place in a region not subject to frost, it has been reasonably conjectured that it is a native of the tropics. What changes the plant has undergone by cultivation, it is impossible to determine. It was found nearly in its present condition, in the possession of many of the Indian tribes, at the earliest period of their acquaintance with Europeans, and according to their traditions had been cultivated by them for ages.

As its range of cultivation embraced the torrid and temperate zones, the character and habits of the plant presented considerable variety, as is seen at the present day. Each section had the kinds which seemed adapted to the soil and climate. The varieties of the south required more time to mature, had a large, tall stalk, with ears of proportionate size, the grains large, but flat, indented on the top, and in many instances of light weight in proportion to the bulk; those of the north matured in less time, had a short and small stalk, small ear, the grains small, round, flinty and heavy. Intermediate sections had kinds of medium character.

An enumeration of the varieties now cultivated is impracticable—they are very numerous; some were derived from the Indians, and, as we can trace them no farther, may be called original; many have been formed artificially, by mixture, and by selection, and in these ways they are constantly increasing. Dr. P. A. BROWN, of Chester county, Pa., in an essay written in 1837, states that he had collected forty-two varieties. Taking those named by him, it would be easy to swell the list, by the addition of others already known, to sixty or more.

Of kinds believed to have been obtained from the Indians, we may mention the Sweet corn, the King Philip corn, the Golden Sioux, and Tuscarora.

The sweet corn was known by the Indians as a distinct sort, and is remarkable for the peculiar shriveled appearance of its grains, their softness and sweetness. But few attempts, probably, have been made to change this kind, and it presents, comparatively, but little variation in its characters. It readily mixes with other kinds, when they are planted contiguously and are in blossom at the same time.

The King Philip corn is a rather small, yellow eight-rowed variety, which has been cultivated in the eastern part of Massachusetts, and in Rhode Island.

The Golden Sioux, or Early Golden Sioux, is a medium-sized, yellow kind, with from twelve to eighteen rows, obtained from the Sioux tribe of Indians. The celebrated *Dutton* corn, which was so highly recommended a few years since, is believed to be only a modification of the Golden Sioux. They are the same in all essential characters.

The history of the Dutton is as follows. In The Cultivator for April, 1838, Judge BUEL states that this kind of corn was obtained about sixteen years previous, "from the Green Mountains of Vermont." A communication from DAN. CHIPMAN, of Ripton, Vt., in the Cultivator for June, of the year before mentioned, states, "Not far from thirty years since, Salmon Dutton, Esq., a respectable farmer of Cavendish, in this state, procured a new variety of corn. Having raised a crop of it, and finding that it had a very large growth, and that it was, at the same time, earlier than the corn then generally raised in this state, and believing that the farming interest would be greatly promoted by raising it, in October, of the same year, he transported a quantity of it in the ear, to the place where our Legislature was in session, and distributed it among the members and others. It was thus distributed through the state, and took the name of the Dutton corn. I took an ear of it and planted it the next season; the stalks grew seven or eight feet high, and were large in proportion to their height. The ears were longer and much larger than any I had before seen, having from twelve to eighteen rows on an ear. The cob was very large and the grains very small, and not so flat as those of other corn; and many of the ears instead of coming to the point at the top end, were flattened and perfectly covered with very small grains. I raised the corn for several years, and found it somewhat earlier than the corn then common in this part of the country. I never ascertained which yielded the most corn by the acre, but considered there was very little difference. The Dutton produced at least a third more corn fodder than the other; and yet, after having raised it five or six years, I threw it by, finding it very difficult to prevent its moulding on the cob, by reason of its great size."

Mr. CHIPMAN states that a kind of corn called the Rocky Mountain corn, was brought into his neighborhood, several years after that above described had been introduced. He says it perfectly resembled the Dutton in every thing but its size, which was smaller and the growth more dwarfish.

The Tuscarora corn is an early, dwarfish variety. The ears are short, with eight rows, the grains of a dull white color, rather large, and of a soft and starch-like consistence, hence remaining longer in a state fit for boiling than more flinty kinds. We have seen a kind called Tuscarora, but which we did not regard as *true*, that was larger and later than this.

The other most distinct varieties in this vicinity are the following: Early white flint, or Canada white flint; an eight-rowed kind, rather small stalk and ear, very early, and perhaps more prolific than any other kind of equal earliness.

Long-eared white flint; ears eight-rowed, sometimes twelve to fourteen inches in length; the cob small, grains round and flinty; of medium earliness; adapted to good lands, and on such, very productive.

Long-eared yellow; resembling the above in all respects but color. This kind is cultivated in the Connecticut valley; we have seen fine samples of it at agricultural exhibitions at Hartford and Springfield.

A yellow, twelve-rowed kind, sometimes called twelve-rowed Canada. Introduced here from the farm of S. W. JEWETT, of Vermont. It is an early and excellent kind.

CHARACTERS OF VARIETIES FOR THE NORTH.—The characters of a good variety of Indian corn for the northern states, are—1. A habit of quick growth. In this section, the seasons, at best, are but just long enough to mature this plant; hence the first point is the ripening of the crop, for if it fails in this particular, the labor of cultivation is lost.

2. A stalk of medium size and strong growth. Some kinds are naturally weak—are more liable than others to be injured by winds or by the attacks of insects, and require more attention to prevent their being overpowered by weeds.

3. A long ear, of uniform size from one end to the other, the cob comparatively small, the grains plump, deep, and so closely set as to entirely cover the cob, even to the top, without any vacancy. Some kinds have very large but-ends, and large, hard knobs at the butt of the ear. It is a great defect, causing the retention of moisture, and rendering the corn liable to injury by moulding in the crib, or while standing in the shock, and also by being frozen while wet, which destroys its germinating power.

4. Ears set on the stalk at a moderate height, and on short stems or branches. A variety that ears high, is likely to be proportionately more productive of stalk than grain. Some kinds ear so low that the grain is liable to be damaged by coming in contact with the ground—as the ears hang down, more or less, when nearly ripe. If the stems are short, the ears are less likely to be injured in this way. If the ears set too low, it is more difficult to cure the corn in shock, both on account of its being affected by the dampness of the ground, and by packing so closely as to keep out the air.

5. A thin husk. There is much difference in varieties in this respect. Those which have a light thin husk, ripen much faster, and can be husked much more rapidly, than those which have a thick covering.

An observance of these principles may lead to the adoption of the best varieties. It must be remembered, however, that to perfect a variety, and continue it without degeneracy, the strictest care is required from year to year. The seed corn should be selected *in the field*, as soon as it is sufficiently hard, and regard should be had to *every point* which it is desired the variety should possess.

PARCHING OR "POP" CORN.—In the neighborhoods of cities, the selling of parched corn is carried on to a considerable extent. The best kinds for this purpose are the Rice corn, and and a variety sometimes (though improperly) called Egyptian corn.

The Rice corn is a dwarfish variety, bearing from three to four ears on a stalk; the ears seldom over four inches in length, with from eight to twelve rows; the grains of a similar color and shape to rice; very flinty; and when cooked, either by being boiled while unripe, or parched after having become hard, of a rich and excellent taste. Of medium earliness, or rather late. Origin unknown.

The so-called Egyptian variety is larger than the above; stalks six to eight feet high; two to four ears on a stalk; ears five to seven inches long, generally with eight rows; the grains small, of roundish form, and of a dark blue or black color. Of medium earliness. We know nothing in regard to its origin, and can give no reason for its being called Egyptian. It is evident that this variety has no special affinity with a kind of *millet* which has been cultivated in this country, under the name of Egyptian corn.

Neither of the last-named kinds are very productive; but it may be an object to cultivate them in particular districts, on account of the high price they command from the dealers in parched corn.

The Poultry Yard.

Origin of the Domestic Fowl.

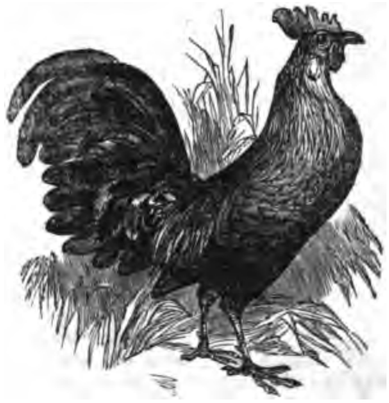
IT is impossible to trace remotely, the history of the common fowl. It was kept in a state of domestication by the ancient Greeks and Romans; but as is observed by MARTIN, in his late Treatise on Poultry, in *Knights Farmer's Library*,—"The circumstances attending their primeval subjugation are utterly buried in oblivion. The same obscurity that hangs over the early history of our domestic quadrupeds, hangs over that of our domestic birds, nor can we hope ever to dissipate it."

The only part of the world in which the fowl is still found in a wild state, is Southern India and the islands of that region. Nor have we any account of its ever having been met with elsewhere, in a state of nature. Hence it is reasonably concluded that the bird is of Indian origin. The author above mentioned informs us that at least four wild species are found in India, Malaya, Sumatra and Java; viz., 1. The Great Malay, Cochin-Chinese, or Kulm Fowl—(*Gallus giganteus*, of Temminck;) 2. The Javanese Jungle-Fowl—(*Gallus bankiva*, Temm.;) 3. Sonnerat's Jungle-Fowl—(*Coq sauvage*, of Sonnerat, *Gallus soneratti*, Temm.;) 4. Stanley's Jungle-Fowl—(*Gallus stanleyii*, of Gray.)

The first of these is undoubtedly the parent of our domestic stock, known under the names of Malay, Java, Cochin-Chinese, &c.

The Javanese, or Bankiva Jungle Fowl, fig. 12, is thus described by MARTIN:—

"This beautiful bird is found wild in Java, and is about equal in size to an ordinary Bantam—the black-breasted red varieties of which, with a dark steel-blue band across the wings, it closely resembles. The space round the eyes and the throat are bare, the comb is much developed and deeply serrated along the upper ridge, the wattles are rather large. Long, clear, brilliant, golden orange hackles cover the neck and rump. The upper part of the back, over which the hackles of the neck are continued, is bluish black. The middle and lesser wing coverts are of a rich deep chestnut, with the webs of the feathers disunited; greater coverts, steel-blue; secondaries also steel-blue, with a border of chestnut. The quills are brownish-black, edged with pale reddish-yellow. Tail black, glossed with changeable green and blue. Breast and under parts black. Contour very graceful, and every action animated and lively.



12—JAVANESE JUNGLE FOWL.

"It would appear that an allied but distinct species exists on the continent of India, distinguished chiefly by its larger size. Of this continental species, Sir W. Jardine states that he has seen three or four specimens. all of which came from India proper. From this perhaps, may be deduced the black-breasted red variety of our spirited game fowls.

"With regard to the Bankiva jungle-fowl, it cannot be doubted that it is the main source, if not the only one, of our Bantam breeds. The very term *Bantam* is sufficient to establish the fact. Bantam is the name of a town and district in the north-west of Java, belonging at present to the Dutch. The town is now fallen into decay, but was formerly a place of great importance, and still boasts of a governor, whose residence is at Sirang, or Ceram, a thriving town some miles inland. The Portuguese, who visited Java in 1511, carried on a great trade from Bantam with Hindustan and China, chiefly in pepper. In 1595 the Dutch established themselves at Bantam, and in 1602 the English erected a factory in the same place, which was the first possession of the English in the East Indies. Of the subsequent predominance of the power of the Dutch, who built the town of Batavia, not far distant from Bantam, this is not the place to speak. From this statement, however, it is evident that the beautiful Bankiva jungle-fowls, reclaimed by the natives, and sold to the British at Bantam, while their factory was established there, were imported into England under the very natural appellation of Bantam fowls. Their elegance and diminutive size rendered them favorites, and in due time the name, belonging exclusively to these birds, came to be conferred on all small or dwarf fowls indiscriminately, whether of this pure breed or otherwise. The domestic Bantam stock, as every one knows, breeds freely with ordinary fowls, the mixed offspring being intermediate in size between their parents; and that the Bankiva jungle-fowl will breed with our domestic Bantam race, and with other races, the offspring being fertile, we ourselves can testify. Such birds are common in the gardens of the Zoological Society, and so closely do the offspring of the Bankiva jungle-cock and a brown domestic Bantam hen resemble the wild or original breed, that on more than one occasion we have been in doubt; nor is this to be wondered at—on both sides was the lineage the same."

The male of Sonnerat's Jungle Fowl is described as follows:—

"Size intermediate between that of a Bantam and a game cock; but the general contour is peculiarly light and graceful, and vigour and alertness are displayed in every action. The comb is large, with a sub-serrated ridge, that is the ridge is but slightly dentated, in comparison with the comb of the *Gallus bankiva*. The wattles are large and double. The hackles of the neck, the wing coverts on the shoulders, and the tail coverts are dark grayish, with bright golden orange shafts, dilating in the centre and towards the tip into a flat, horny, and very glossy plate. In some of these feathers the shaft takes an elliptical or oar-like shape, in others it puts on the appearance of a long inverted cone, from the centre of the base of which a battledore-like process arises."

13 SONNERAT'S JUNGLE FOWL.

"The feathers of the middle of the back, breast belly and thighs, are of a deep rich gray, with paler shafts and edges. The tail is of a deep, rich refulgent green, but the feathers which immediately succeed the hackles of the lower part of the back, and lie against the sides of the tail, are rich purple with a pale yellow edge, those next in succession are a golden green with gray edges, and all are glossed with brilliant metallic reflections. Bill, legs, and toes, yellowish. When seen in a bright sunlight, the plumage of this elegant bird glitters like gold, and presents a most rich appearance. The female is generally described as destitute of those expanded ornaments to the hackles and wing-coverts, which are so conspicuous in the male; and certainly we have not observed them on the specimens which we have seen.

"Sonnerat's jungle-fowl, the jungle-cock of the British, is noted for its prowess and resolution, insomuch that it is anxiously sought after by the cock-fighters in Hindustan, who rely on it for victory when pitted against larger game cocks. It does not appear however that the cock-fighters breed this bird in its purity; they seek after the wild birds, which soon become tame. Johnson in his *Sketches of the Field Sports as followed by the Natives of India*, informs us that the Sheccaries, a people of low caste in India, gain a livelihood by catching those jungle-fowls, and also other animals.

"In general habits and manners the jungle-fowl resemble their domestic relatives; the cock proudly leads his train of females, and vigilantly watches over their safety. On being suddenly disturbed the troop scatters in all directions, seeking safety under covert of the dense brushwood. In spots where they are numerous, the challenging of the cocks to each other may be heard on every side around, and yet such is their cunning and keenness of sight, that the sportsman, unless he is well acquainted with their habits, is often disappointed in his attempts to get a fair shot.

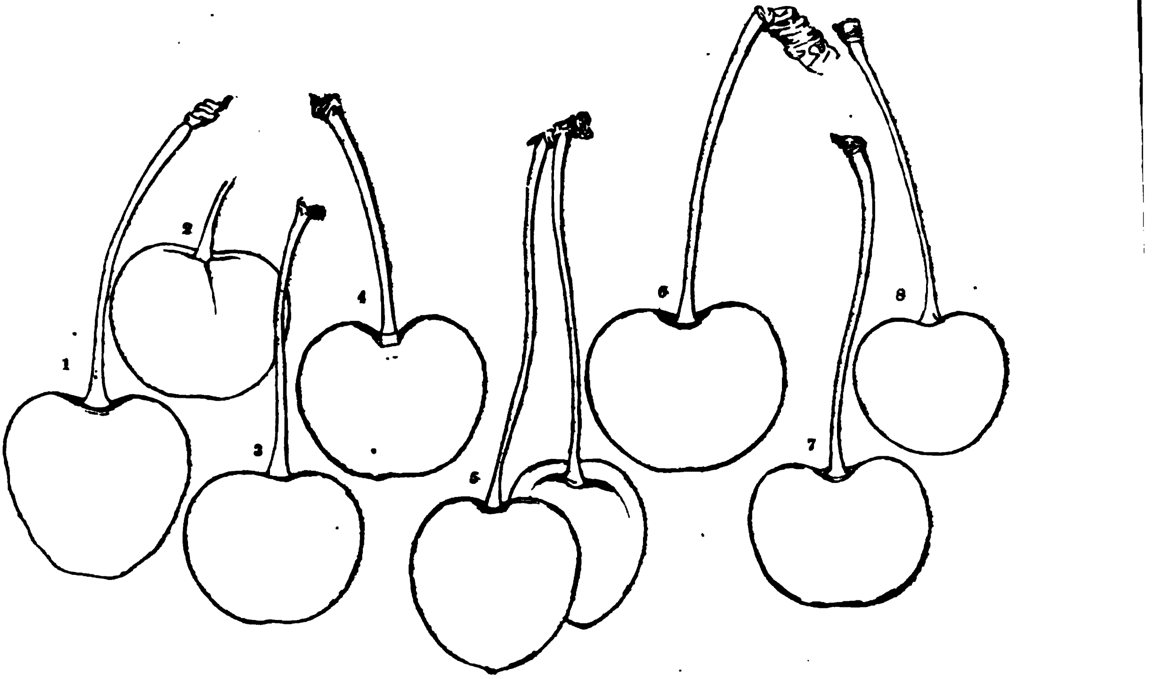
"Sonnerat and many other naturalists have contended that to this species alone are our breeds of domestic fowls to be traced. We think it most probable, notwithstanding the peculiarity of the plumage, and the circumstance of the throat of the female being covered with feathers, instead of being naked and wattled, that the *Gallus sonneratii* has intermingled with other breeds, or contributed to improve them—and among them we would enumerate the breeds of high-spirited game fowls kept for fighting by the Mussulmans of India, and which have been long celebrated; but we cannot admit that Sonnerat's jungle fowl is the sole origin of the domestic race. The *Gallus bankiva* and the *Gallus giganteus* present stronger claims to our notice, nor can we doubt they contribute the groundwork of some of our most remarkable varieties. There are several other species of wild jungle-fowl, to which we shall here only briefly allude, as they are not likely to have contributed to the establishment of the domestic race. One of these is the Bronzed Cock of Summatra, (*Gallus æneus*,) a fine species, remarkable for a large comb, smooth along the ridge. The neck is not covered with true hackles. Another is the Ayam-alas jungle-fowl or fork-tailed cock of Java, (*Gallus furcatus*.) This species has no true hackles on the neck, and the throat is adorned with a single large wattle only, springing from a central line."

In our next and succeeding numbers, we shall give descriptions and illustrations of other kinds of fowls, and the different classes of poultry.

Profits of Hens.

Dr. J. BARSTOW, of Chicago, kept an account of the expense and income of fifty hens, for one year. The cost of keeping on corn, was about twenty-five cents for each hen. The hens averaged ninety-one eggs each. One of the editors of the *Prairie Farmer* states that he has kept forty hens the past year; that the cost was about the same as given by Dr. Barstow; but the fowls averaged only sixty-five eggs each. The fowls in both cases were confined to a yard, but one lot of them were allowed to have their liberty for a part of each day. They were fed with fresh meat occasionally.

LARGE POULTRY.—At a show held in England, under the direction of the late Earl Spencer, the following were the dressed weights of some of the poultry exhibited: The best turkey weighed twenty lbs. 4 oz.; capon, 7 lbs. 14½ oz.; pullet, 6 lbs. 3½ oz.; goose 18 lbs. 2½ oz.; couple of ducks, 15 lbs. 10 oz.



1. *Black Tartarian.*—2. *Mayduke.*—3. *Black Eagle.*—4. *Knight's Early Black.*—5. *Elton.*—6. *Graffion.*—7. *Downton.*—8. *Downer.*

The Horticultural Department.

CONDUCTED BY J. J. THOMAS

The Eight Cherries

Selected by the National Fruit Convention of New-York.

THE National Fruit Convention, held last autumn in New-York city, selected through its fruit committee, and after deliberate discussion, adopted select lists of the different kinds of fruit, consisting of such varieties as thorough trial entitled to rank as *worthy of extensive cultivation*. Among them, the eight varieties of cherry were chosen, as figured above. A part of them may be old acquaintances to many of our readers, but we believe some remarks on the character of the *eight best and most thoroughly proved varieties*, cannot fail to be interesting to many young cultivators.

I. BLACK CHERRIES.

1. KNIGHT'S EARLY BLACK.—This excellent cherry was raised by the late President Knight, of England, from the seed of the Graffion or Bigarreau, fertilized by the Mayduke. It partakes chiefly of the character of the former, and is distinctly a heart cherry, the fruit being improved by the cross in an approach from the firm flesh of the Graffion to the tender juicy flesh and higher flavor of the Mayduke. The growth of the tree much resembles that of the Graffion. The fruit is large, very slightly irregular, or wavy in outline, obtuse, heart shaped, nearly black; stalk an inch and a quarter to an inch and a-half long, rather stout, *in a deep cavity;* flesh blackish crimson, very tender, juicy, of a rich, sweet, and excellent flavor. In quality, it resembles the Black Eagle, but is slightly larger, earlier, and is readily distinguished by its much deeper cavity at the stalk, and by the more downy axils at the midrib on the under surface of its leaves. The figure represents the average size only; larger specimens are often found. It ripens about the middle of 6 mo. (June.)

2. BLACK TARTARIAN.—A well known and most popular variety, which originated in Russia. The growth of the tree is vigorous, the branches erect, leaves large, dark green. Fruit quite large, often an inch in diameter, but on the densely loaded branches of full bearing trees, sometimes not more than seven-eighths of an inch; heart-shaped; surface uneven or wavy, glossy; blackish crimson, becoming nearly black; stalk an inch and three-quarters long, moderately sunk; flesh dark crimson, not very juicy, sweet, rich, moderately high flavored. Ripens nearly the same period as the preceding.

3. MAYDUKE.—Another well known and excellent cherry, very hardy, and adapted to nearly all climates in which any varieties thrive. In richness of flavor it is unequalled among the class of sour cherries. Fruit large, varying from roundish to obtuse heart-shaped; changing from red to nearly black; flesh dark red when ripe, very rich, juicy, acid, and high-flavored. The growth of the tree, although somewhat irregular, has unusually upright branches for the sour class. It is remarkable for the variable period of its ripening, commencing early in 6 mo. (June) and often continuing 6 weeks; the same tree often bearing ripe fruit on one part and green on another, and in rare instances, ripe fruit has been found growing side by side with green and half-grown specimens. The fruit is usually gathered long before full maturity, and before the flavor is at all developed, and hence many who have eaten it for years, are ignorant of its real excellence.

4. BLACK EAGLE.—A cross of the Graffion and Mayduke, much resembling Knight's Early Black, but distinguished as already pointed out. Rather large, obtuse heart-shaped, blackish crimson or nearly black; stalk moderately slender, an inch and a-half long, but little sunk; flesh dark crimson, rich, high flavored, less bitter than the Black Heart, and less insipid than the Black Tartarian,—which in time of ripening it immediately succeeds.

II. LIGHT COLORED.

5. ELTON.—Raised by President Knight from seed of the Graffion, fertilized with pollen of the White Heart. Fruit rather large, ovate heart-shaped, somewhat

pointed at apex, often a little oblique, reddish yellow in the shade, red in the sun; stalk two inches long, slender, slightly sunk; rich and very high-flavored; stone rather large. It ripens immediately after the Black Tartarian, and has proved very productive in Western New-York. It is one of the few cherries which have strongly colored reddish-purple petioles.

6. GRAFFION, *Bigarreau*, or *Yellow Spanish*, the *White Bigarreau* of Manning. Very large, often an inch or more in diameter, obtuse heart-shaped. flattened at base, smooth and regular; pale waxen yellow in the shade, a bright red cheek in the sun, with minute intermediate carmine dots; stalk rather stout, one and a-half to two and three-quarters of an inch long, in a wide, shallow cavity; flesh yellowish white, firm, sweet, of a good but not very high flavor. It ripens after the Elton or the latter part of 6 mo. (June.) Its popularity is increased by its size and beauty, being one of the smoothest and most finely colored of all cherries.

We have tried to adopt the name Bigarreau, as given by Thompson and Downing; but from the great number of other varieties called Bigarreau, each of which has some distinctive epithet, while this has none, difficulty has arisen, and we have concluded to return to the old name, Graffion.

7. DOWNTON.—Large, obtuse heart-shaped, roundish, surface slightly wavy; light yellow, intermixed with dots and shades of light red; stalk one and three-quarters to two inches long, in a rather large cavity; flesh yellowish white, tender, delicate, of a sweet, rich, and excellent flavor. Not so handsome as the Graffion, but superior in flavor, and ripening nearly at the same time, or scarcely later.

8. DOWNER, *Downer's Late*, or *Downer's Red*.--Originated at Dorchester, near Boston, and is the only one of these eight varieties, of American origin. It is medium in size, very regular round heart-shaped; bright red, becoming darker and full red when ripe; stalk one and a-half to one and three-quarters inch long, in a very even small cavity; suture a single line on one side; flesh soft, with a high and very good flavor. Like all high-flavored varieties, it requires full ripening to become good. It ripens some days after the Downton and Graffion. The growth of the tree is rather erect, more so than any of these eight sorts, except Black Tartarian. It is very productive.

The figures given, were all drawn from specimens of medium size under good culture, grown in western New-York, and do not perceptibly vary in size with those grown in other regions of the country.

Selecting Varieties of Fruit.

Judging from Books and Nursery Catalogues, an inexperienced cultivator would be struck with the mighty host of rich and splendid varieties in cultivation; and would perhaps consider it only necessary to make a radom plunge into the vast collection in order to obtain a choice number, more or less, as he might need. Single nurseries contain in some instances hundreds of varieties, all, of course, worthy of cultivation,—else why would they be cultivated? The London Horticultural Society has 900 different varieties, after rejecting several hundred others as worthless. In this country, in addition to the existing multitude, new sorts are constantly springing up and rising into notice with high recommendations.

At the late American Congress of Fruit Growers in New York City, a motion was made by a distinguished member, to *cull* from this vast assemblage—to reject all but the very finest, and to appoint a committee to bring in a SELECT LIST of 100 sorts of apple, 100 of pear, 50 of peaches, &c. A committee of nine was appointed, without restricting them to the exact number, and they immediately commenced the work of selection. They adopted a liberal basis—did not agree to pronounce all their recommended fruits as *first rate*, but only worthy of *general cultivation*; they did not require a unanimous vote in committee in favor of any sort, but only a two-thirds majority; and they agreed to propose to the convention as large a list as they could thus agree upon.

Very well,—and what was the result, with all this latitude, and with this host of varieties to select from? After several hours of labor, the committee could agree to recommend but TEN *varieties for* GENERAL *cultivation, and* FOUR *for* PARTICULAR LOCALITIES. A great number of others were proposed, but none passed examination. The great Pomological Garden of Robert Manning at Salem, contains a thousand varieties of *pear* alone;—the committee could agree to recommend twelve as worthy of general cultivation. *Nine* Peaches, *eight* Cherries, and *eight* Plums, were all that were chosen of these respective species. Indeed, so difficult was it to propose any sort, to which some serious objection was not known by members of the committee, that it was admitted that but little could be accomplished, unless *new varieties of the right stamp could be manufactured to order.*

The truth is, there is a very large number of fruits, and especially apples, in all parts of the country, that are *almost* first rate, and *almost* worthy of cultivation; but having reached that particular level it seems nearly impossible to strain the point a single notch higher. Hence, if the cautious cultivator, after procuring a hundred new and highly praised sorts, shall find *one* that is decidedly first rate, and excellent in every particular, he may regard his labor as well repaid. But it should be constantly borne in mind, that no new fruit deserves adoption, which is not decidedly superior to old varieties of the same season of ripening, in at least one important particular, superadded to fine quality.

Preserving Grafts.

We are often asked, if grafts may be cut in winter and kept in good condition a month or two before setting in spring. When we answer that we have kept grafts cut in the latter part of summer until the following spring, in a fresh state, and which grew and flourished, the difficulty will vanish.

Many persons mistake the mode in which scions are spoiled in keeping. We sometimes see the cut ends carefully covered with wax, to preclude the escape of moisture from the sap pores, and at other times the ends are stuck into a potato, for the same purpose. Now, it happens that nearly all the moisture escapes through the pores in the bark; hence it is of greater importance that the sides of the shoot be well covered with a moist substance. Many cultivators preserve grafts in good condition by partially or wholly burying them in the earth of a cellar; but they become thus covered with sand and grit, and injure the grafting knife, unless well washed. Another mode, avoiding this difficulty, and by which grafts may be bept through winter, is to bury them, out doors, in a box open at the bottom only, the grafts being kept from contact with the earth below them by cross sticks in the box. But the best mode, is to fill a large box with fine pulverised moss, or still better, with moist saw-dust, in which the grafts are simply immersed, and which are thus packed away or withdrawn with the greatest ease, at any desired moment. A box of sawdust, in a cool cellar, will remain moist without watering for many weeks. Too copious or too frequent an application o. water, would cause decay in the buds. On the other hand, a slight withering is safely and gradually restored by a moderate increase of moisture. In one in stance, we received a bundle of grafts in autumn, from some hundreds of miles, the leaves being left on to keep them moist, but in reality causing them to wither rapidly by throwing off the moisture. When received they were quite dry; but they were well encased in moss, and buried in the earth till next spring, when they were perfectly plump, and being set, all grew.

Grafts or buds, to be forwarded by mail, may be kept fresh, by wrapping each shoot in oil-cloth or oil-silk, (such as is used for lining straw hats,) drawing it closely around it by means of fine thread. This encloses all the moisture in an air-tight casing, and it remains unchanged for many days.

Management of House Plants.

INQUIRIES are frequently made as to the successful management of green-house plants, which are kept in the rooms of dwellings. A chief error in their winter treatment, consists in making no distinction between their condition while rapidly growing, and in a dormant state. When vegetation is in full progress, warmth and a large supply of water, are indispensible. But during the period of rest, plants should be kept cool and rather dry. A temperature of 50 degrees is much better than that of ordinary living-rooms. While in this stationary condition, very little moisture is given off through the leaves; while growing, it is thrown off rapidly. Hence water is to be applied very sparingly, and at remote intervals, in winter; as very little escapes by direct evaporation from the soil. So long as a moderate degree of moisture is found beneath the surface of the soil in the pots, watering should be omitted. Thorough drainage is also of importance, and is well effected by filling one-fifth of the pot at the bottom with fragments of charcoal. Washing the foliage from dust, should be attended to, and may be conveniently done by syringing with *tepid water*, turning the pot at the moment on its side, that the soil contained it may not be too much soaked. In the absence of a syringe, a small watering-pot, with fine perforations, held at a little height, will answer a good purpose. The chief requisites, then, for good management, may be summed up as follows:—

1. Spare watering;
2. Low temperature;
3. Plenty of light;
4. Drainage;
5. Washing foliage.

Prices of Fine Fruit.

In many parts of the country, a greater number of trees have been set out within the past five years, than during the whole previous period back to the settlement of the country. Many have hence believed that the market would be surfeited when these bear, and hence have ceased to set out trees. Is their judgment correct? Let us glance at a few facts.

The great peach orchards of New-Jersey and Delaware have long been famous, many occupying a hundred acres or more, and one, the celebrated orchard of the Reybolds, covering a thousand acres,—whose crops were so large as to give constant employment to two steamboats and a schooner in conveyance to market. As a consequence, the price of peaches has fallen quite low in comparison with former times. Much smaller orchards, near smaller cities, have glutted the market. But it must here be observed, that the peach is a very perishable fruit, and can be kept a very few days at longest. Plantations of perishable fruits for market, are therefore to be made with some caution; but the objection will scarcely exist with such as keep for months.

If one large city will afford market for but a few steamer-loads of peaches,—which must all be consumed within three days after being purchased,—fifty times the amount of keeping fruit will find consumers, if it may remain on hand for months together. Especially will this be the case, when it is remembered that peaches make their appearance amid a profusion of other fruits; while keeping fruit extends its period of use into the dreary season of the year. But, a single city no longer becomes the limited market for such fruits; the whole country is open; and no night-and-day labors are needed to hurry them into market before decay seizes them. Railroads and canals will take them to any part of the Union; and not only this, but millions in Europe are ready to consume our fruits when our orchards furnish a cheap supply.

The Newtown pippin has already found its way to Europe; but the amount at present, when compared with what it is destined to be when orchards are profusely multiplied, and facilities, and cheapness, increased, is but the slender rill to the mighty river. To produce this great increase, the prices of varieties for export need not be extremely low. They are now high. In the great apple region, Western New-York, the orchardist gladly disposes of his good winter apples for seventy-five cents per barrel, and then makes more from a few acres of orchard than from a hundred-acre farm besides. The Northern Spy, a productive variety, long-keeping and handsome, is eagerly bought at two dollars and three per barrel, for home consumption. Good Newtown pippins in quantity command a high price; and well cultivated orchards of them, in favorable localities, must afford a very comfortable profit to the owners, even when the fruit is much cheaper than at present, a thing by no means certain to take place during the present age, with a whole hungry year and hungry millions ready to consume them. The price of good winter apples at the present moment in Western New-York, does not vary ten per cent. from the price thirty years ago, nor has it fluctuated much during the long interim.

In many parts of the country, the White Doyenne or Virgalieu pear; is a remarkably healthy and productive tree, and yields uniformly fine and fair fruit. Crops from single trees of ten to fifteen bushels are frequent. The fruit raised so far north, matures late, and may be sent hundreds of miles to market. In New-York city, it sells readily for three or four dollars per bushel. Let, for the sake of argument, the trees be increased, so that the cultivator may get but fifty cents per bushel; would not the city demand for them, immediately increase fifty fold? All could then afford to eat them. Now, an acre, of a hundred trees, each bearing but five bushels as a yearly average, would give, at this reduced price, two hundred and fifty dollars a year from the acre—or an interest on some thousands of dollars.

With such facts as the above, we are compelled to conclude that the time has not yet arrived for land-owners to withdraw their attention to an increase of their orchards—but that while the population of the country, and facilities for conveyance, are multiplying so rapidly, prices of suitable varieties are as likely to rise as to sink below their present rates.

Early Lettuce.

The late Judge Darling practiced a mode of obtaining early lettuce, which would prove of value to all who cannot take the trouble to make hot-beds. Commencing with the well-known fact, that lettuce will bear considerable frost, and sometimes survive the winter unprotected, he applied various coverings, as straw, corn-stalks, stable litter, leaves, boards, mats, and even a large inverted box, enclosing plenty of air, but in all these cases the plants perished. Judging that the failure might result from want of light, he applied a sash of lights to a bed of lettuce sown early in autumn. Entire success followed.

The frame, to be warm, was made thick, being constructed of six inch scantling, laid up like a log-house, sloping to the south, as in a hot-bed. The only care needed till spring is, that the snow does not become so heavily piled upon the glass as to endanger the panes, which, if small and thick, will not be the case. Raising the sash to admit air, when warm weather approaches, is all that is necessary. Spring rains should be admitted; or watering given.

We have obtained fine early lettuce, by transplanting fall-sown plants, which had remained dormant through winter, into a small hot-bed, made about the time the frost disappears from the soil, and which thus came into use two weeks earlier than from seeds sown directly into the soil of the hot-bed.

The Early Tillotson Peach.

Some of the finest fruits are slow growers in the nursery. The Sine Qua Non apple, one of the best and most productive early varieties, is of slow growth. Hence it has never been a popular fruit with nurserymen, with whom handsome and thrifty growth is a very important requisite, so long as purchasers regard the appearance of the tree they buy, more than the quality of the fruit it is to bear. For this reason, the Early Joe, a superlatively good apple, but of slow growth, will not probably become very popular, until the public find out that fine fruit and good cultivation, are quite as important as pretty trees when young.

It is for the same reason that the Early Tillotson peach is disliked and underrated. A nurseryman at first sees the tree only, which is not of handsome growth, and the leaves are often much covered with mildew towards autumn. He perceives at once that it cannot attract the attention of buyers, and it is neglected. But where it has come into bearing, it is better appreciated. It often requires two years from the bud, for the trees to attain the size of some other trees of only one year; but in many instances noticed, the old or bearing trees, growing more freely, are as large as other sorts of the same age. We have noticed bearing trees of all ages, from five to twenty years and more, and they would not suffer by a comparison with three-quarters of the other popular varieties of the same age, either in size or productiveness.

The season of ripening is very nearly the same as the serrated Early York, but is more variable, often considerably earlier, and sometimes even perceptibly later.

This peach appears to flourish at the south even better than here. T. S. Pleasants, near Petersburg, Virginia, says, "Among a great many fine varieties, there is none, taken altogether, that I esteem so highly as the Early Tillotson. It is of full medial size; its flavor scarcely to be surpassed; and in time of ripening it is earlier than any other peach of merit I am acquainted with. Had I only known its excellence in time, and planted as extensively as I might have done, it would have yielded me this season a large sum." At Edwards, Miss., it ripened on the 20th of 6 mo., (June,) one day earlier than serrated Early York; and at Mobile, Ala., on the 10th of the same month. A Mobile correspondent of the Horticulturist says, his trees were planted in 1847, "and from the few specimens on the trees this season, [1848,] I think they will be as good as could be desired." The trees must be kept well pruned, by the shortening-in mode, to have the fruit in perfection; we have frequently had fine, handsome, globular specimens, two inches and a quarter in diameter. Many persons prefer its flavor to that of the serrated Early York, the reverse, however, often being the case. We do not regard it, taken altogether, as a variety of so high merit as the serrated Early York; but we consider it as too valuable to be rejected.

Orchards of New Hampshire.

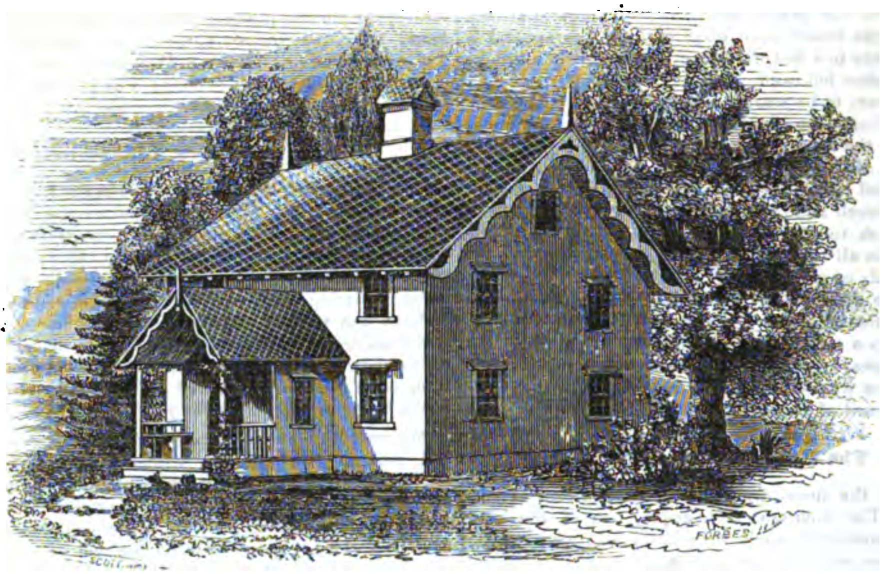
In this locality, the first care of the settlers, was to plant an orchard. This was done on the best land their premises afforded; and as corn and grain produced without manure, that was put around the young apple trees. Consequently the trees grew rapidly and commenced bearing early. The great object for which an orchard was wanted, in those times, was cider, which was considered an almost indispensable beverage. I now see an orchard from which 70 to 80 barrels of cider have been manufactured in a single season, the whole being *consumed in the family*.

My grandfather settled here about eighty years ago, and cleared up from the wilderness. He planted an orchard of about eighty trees, bringing them from Plaistow, forty miles, *on foot;* and in ten years from the time they were set out, he made from them nine barrels of cider. Being highly manured, they matured quickly and decayed early, so that now only seven of them are left, and those are decaying. Such is now the fate of the first planted orchards; but new ones have been planted, and the character of the trees has been changed by grafting—fruit for market and domestic purposes, and not cider, being the object now. It is gratifying to see the change that has taken place within a few years in this respect. Thousands of scions have been set the present year, some sending to Boston for new varieties, and others procuring the best here. But from the manner in which *some* graft, we might conclude without further evidence, that they did not read "The Cultivator," otherwise, to say the least, they would not set scions in the extremities of the limbs of large and decaying trees. But these same individuals would no doubt be *horrified* at the idea of so far compromising their dignity as to admit they could learn anything from an agricultural publication! Here, as well as elsewhere, there are those who *know too much to learn!*

We have a young orchard of grafted apples, in which are some excellent varieties, and some that are inferior. The individual that grafted this orchard was *rascally* enough to put in scions taken from ordinary trees. Such a course cannot be too severely condemned, and the person who would do it is almost too *mean* "to get a living by stealing." The safest course is for every farmer to do his own grafting, or at least to select his own scions; and then, if, after waiting anxiously a number of years, he finds his trees bear inferior fruit, he has the *satisfaction* of knowing that there is no one to blame but himself. With good tools and grafting wax, and care in setting, every one may graft his own trees, and he will find his advantage in so doing. W. L. Eaton. *East Ware, N. H., November* 20, 1848.

Seasonable Hints.

During mild weather in winter, hardy fruit trees may be pruned, as well as grapes, and grafts may be cut. Young fruit trees, which have not had a conical bank of earth thrown round them,—the most perfect protection from mice—should have the snow trodden round them as often as it freshly falls, which will exclude the mice from them. Catterpillar eggs—known at a glance by their knobby clusters on the smaller branches—should be torn or cut from fruit trees before they hatch in spring.

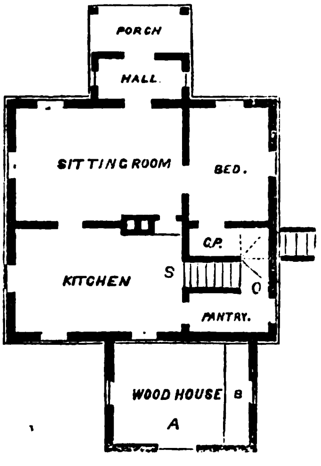


6—ELEVATION.

Rural Architecture.

Plan of a Small Farm House.

EDS. CULTIVATOR—Enclosed is a plan and perspective view of a SMALL FARM-HOUSE. It will be seen by a glance at the plan, that the house is nearly square—the cheapest of all forms. The size is 29 by 26 feet, with a hall and porch, together 10 feet square, and a woodhouse in the rear, 12 by 16 ft The hall is placed in the middle of the front, and may be lighted by a window on each side, of the width of one glass, or by a window in the door. From the hall, we enter the sitting room, which is 12½ feet wide by 18½ long, lighted by 2 windows, and has a crockery closet at *c*. At the left as we enter, is a bed room, 9 by 12½ ft. with a large clothes press under the stairs; passing through we enter the kitchen, 12 by 18½ ft., which is lighted by two windows, and has doors opening to the pantry, stairway and woodhouse. The pantry, (5 by 9) is lighted by 1 window, and has a door at *o*. opening on the cellar stairs. In the wood house, A. is an opening for throwing in wood, six or seven feet from the floor, four feet square, closed by a door; B. is a work-bench, with a window over it.

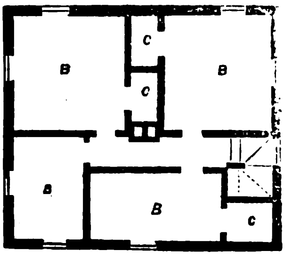


7—FIRST FLOOR.

On the second floor are four fine bed rooms, three of which have commodious closets. The garret can be reached through a scuttle near the chimney, by means of a light ladder, which, when not in use, might be placed against the wall at L. The first floor is intended to be nine feet high, the second eight. The cellar might be made under the whole house, or only under the back half. O. is the outside cellar stairway.

It will be objected by many, that this house has no parlor. This plan is not intended for those who have the means to build a room *especially for company*, but for that large class of farmers, who, while they desire something convenient and tasteful, cannot afford to pay for a room which they do not use themselves.

A glance at the plan will show, that it is intended to be built of wood. For the outside covering, perpendicular boarding is preferable to clapboarding, because it is firmer and cheaper. I hope the exterior that I have sketched, is sufficiently expressive of ruralness. Although the desire for novelty, and the wand of fashion, have done much towards creating the prevalent rage for Rural Gothic dwellings, yet the intrinsic beauties of the style will always command for it the admiration of the rural architect, and it has now become so common in most parts of our country, as no longer to be considered a fantastic novelty by the staid portion of our people. All who examine the various forms of domestic architecture can now easily have opportunities of seeing its beauties and detecting its faults.



8—SECOND FLOOR.

The features which designate principally the style of this building, are the verge boards and the bold projection of the roof. (The roof in the engraving is represented hardly steep enough for the style.) To support this projection, the rafters (which should be of rather large size, say 6+4 in.) should run past the plate their whole size, about 18 inches or two feet.

The square end of the rafter, is, I think, a decidedly ornamental feature of the otherwise plain eaves. The verge boards I have represented in the heaviest style that is admissible, because any but *substantial* *looking* ornaments are out of place on a farm house, and as a kind of example to operate against the other extreme—flimsiness. The only finish necessary for the roof projection, is, that the roof-boards over the projecting part should be of inch and a-half stuff, (to prevent the shingle nails from coming through) planed on the under side, and matched. The eave trough might be of tin and nailed to the roof, or formed by nailing a narrow board to the edge of the lower roof board. The ceiling of the porch should be made in the same way as the roof projection; the posts of six inch stuff made octagonal by trimming off the corners, the top and bottom being left square. The front door I have represented in the drawing as pointed. As, however, there is no other feature of the kind in the house, I have come to the conclusion that it looks ambitious and out of place, and I beg leave to have the reader consider it square. To the chimney I have sought to give an ornamental effect, by capping it with two slabs of stone.

I will conclude with a few words in regard to the interior finish. In all parts of our country *pine* is the material most used for the interior woodwork of dwellings, and it is a common practice to cover it with white paint. How such a practice could ever have obtained, among an intelligent people, I cannot understand. Its warm lively color, when freshly planed, is peculiarly adapted to give to rooms a cheerful and smiling expression. When we know that this pleasing tint can easily be preserved, and rendered even more soft and bright by varnish, at no greater expense than would be incurred in giving it a good coat of paint, can we help being surprised that its beauties have been so long carefully concealed by the cold glare of white paint? Besides, the color of the pine, as brought out and preserved by varnish, harmonizes with furniture much better than any paint, and would of itself add much, apparently to the furniture of a room. Darkened and mellowed by time, it would at length, with the inmates of the house, assume that sober though still cheerful expression, which gives to age one of its greatest charms.

While on this subject I will say a word about black walnut, which, where the intention has been to varnish, has been used more than any other wood for the interior finishing. It has been much used in cabinet work, and is one of the most beautiful of our native woods. Its dark rich shades impart to the lofty apartments of mansions a stately and appropriate dignity, but for the rooms of ordinary residences, its sombre hue renders it quite inappropriate. And were I to have the choice of two evils, I would prefer white paint with its glare to black walnut in its gloom. F. J. Scott. *Toledo, Ohio.*

The Working Woman's Cottage.

Editors of Cultivator—Thinking I may be of some use to the class to which I belong, I herewith send you a plan of a "Working Woman's Cottage," which is particularly adapted to her use.

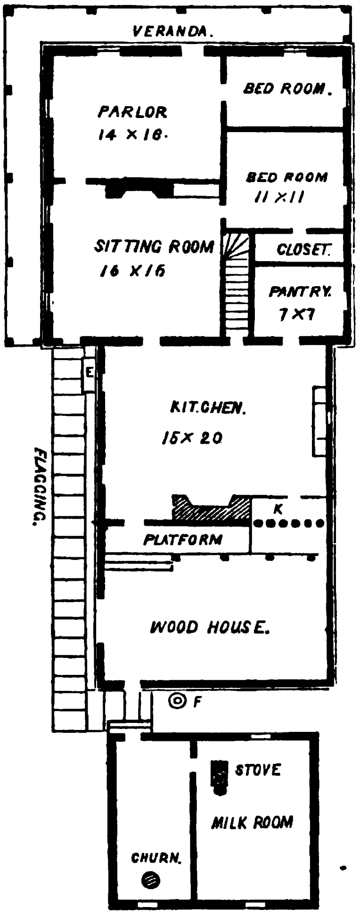
In sketching this house, my first and most important object is convenience; the next is pleasantness; the third, is economy in cost of building; the last, is a tasteful and inviting appearance.

The main part of the house is 27 by 30 feet, one story and a-half high, with attic windows, above the veranda; these windows answer every purpose for chambers, and are an ornament to a house.

The veranda will be in front and on one side, with 2 doors and 4 windows opening upon it, the blinds must be alike to all, reaching to the floor.

What a delightful place for the family group to assemble in and spend the fine summer evenings, after they have finished the labors of the day If any abode on earth ought to be pleasant, it is that of a working family, their social privileges being more limited.

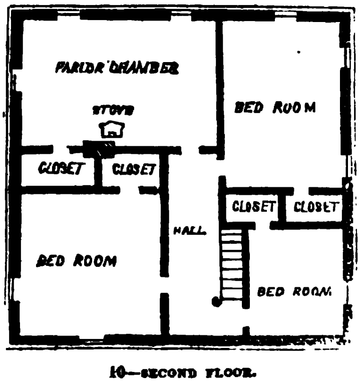
The platform under woodhouse, should be large enough to wash on in the summer. E. Outside cellar door.—F. Pump.



9—First Floor.

As you enter the kitchen fr'm the woodhouse first comes the cooking stove, and fire place, next the closet (K.) for kettles, and many other things not fit to be put in the pantry; next, if you wish, the shelf for the water pail to stand on, the sink, with a shelf at the left hand to put dishes on, then the pantry door, with a space between that and the cellar door.

Next in order is the sitting room, a pleasant convenient room; the working woman's sitting room, will also be her nursery, her library, her vestibule; her bed room, is pleasantly situated with a convenient closet, her parlor is handy by, where she can use it at any time; her kitchen will also be her eating room, except in very warm weather. The chimney is to be built from the bottom of the cellar, with a fire-place if wanted. Stoves are best in winter, fire-places in spring and fall.



10—Second Floor.

I omit a hall, for the sake of convenience, to get the number of rooms wanted in a certain space, also to have doors, opening upon the middle of each veranda.

This house contains all the room a common sized family needs, with four sleeping rooms up stairs and two below.

Some men will place a veranda on one side of a kitchen, and bed-room and pantry on the other; such kitchens are good for nothing to work in.

Those little attic windows are so nice and convenient for chambers, so easily cleaned, just high enough to look from when sitting in a chair, and are out of the way of children. I do detest large chamber windows, coming almost to the floor; it is such a *big job* to clean them, and so much danger of children falling out.

What can be more unwished for, than a great house on a farm, with two or three flights of stairs? I would not purchase a farm with such a dwelling house upon it, unless I wished to live in perfect slavery.

A farmer's wife has exercise enough during the year, without more room to take care of than is actually necessary.

How many great awkward 2-story farm houses, we see, with the front part shut up and inhabited only by spiders and flies. Then little cottages, with two or three wings patched on to them; if their internal arrangement is as irregular as their external appearance, they must be prodigiously inconvenient.

I do wonder that men of sense, will erect such dwellings. When some persons undertake to build a farm-house, the first and most important consideration is to be sure and have it look well on the outside, to arrest the attention of the passer-by. When this purpose is accomplished, they are abundantly satisfied; it matters not how inconvenient or unpleasant they are within.

Some persons think a milk-house, ought to be built partly of stone, with stone floor. This is a mistake; stone causes dampness, which prevents cream from rising. Milk requires a dry, cool place.

There ought to be shade trees, on the south and west side of the dairy house. This house will be easily built, easy to live in, easy to be paid for. The cost, including dairy house, if well built, about 1,000 dollars. This is just as I should want a house at all times and seasons.

If necessary or desirable, the space at the side of the kitchen chimney, marked for kettle closet, could be converted into a bathing room, and but a trifling expense would be necessary to construct a shower bath, and might save sickness and the dreaded " doctor's bill."
A Farmer's Wife. *N. Y.*

An Acrostic.

Another year, its wings hath spread,
Light sits the crown upon its head;
Bring flowers of Hope, a garland twine
Around the infant Forty-nine—
Nor seek to stay his flight with tears,
Yet stored for sins of former years.

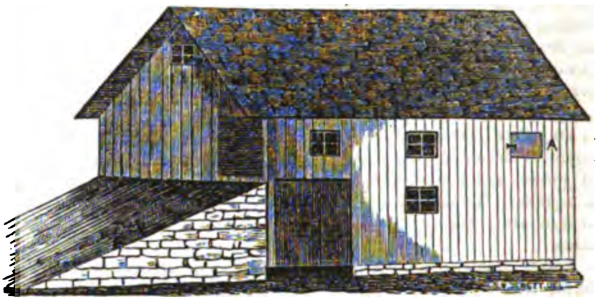
Contributors and patrons dear,
Untrammelled we present our cheer—
List'ning to all, with willing mind,
To find the *truth* we're still inclin'd;
Intending always to advance
Various improvements, which, perchance,
Assist the hardy sons of toil,
To become masters of the soil.
Onward our course—which to maintain,
Remember, friends, your aid we claim.

Economy of Labor may be attained in many ways upon the farm, by the exercise of thought. A single example,—by building the barn on a side hill, so that the loaded team may be driven pretty well up towards the roof, and so that the load may be pitched down instead of up, would prevent a great deal of hard exercise of sinews in elevating the loaded fork.

Analysis of Soil.—Pro. J. P. Norton of Yale College, thinks that a good agricultural chemist cannot be made with less than two years of experimental study, in this particular department.

A Two-story Sheep-Barn.

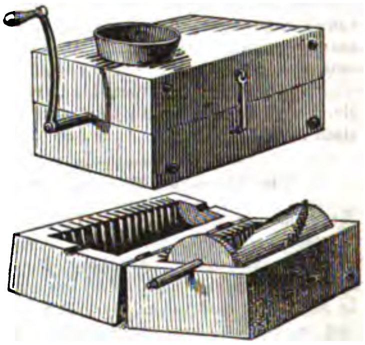
The annexed engraving represents a barn for sheltering sheep. The plan is adopted and recommended by Mr. S. W. Jewett, of Weybridge, Vermont. It will be seen that the building has two floors for the sheep—thus doubling the accommodations. Mr. J. says, a shed 18 by 26 feet, with posts 13 feet high, will make room for two flocks of sixty in each, including the space occupied by the feeding boxes. The sheds should be lighted and ventillated by slide windows on each side.



13—TWO-STORY SHEEP BARN.

" Some of these sheep-barns," says Mr. J., " I build of sufficient size to contain hay at one end. The cut here given shows one of this class, 25 by 34 feet; 12 feet at one end is occupied for storing hay; the door represented at A. is the pitching hole. The basement is constructed with double doors of sufficient width for backing in a cart or sled. To accommodate in loading the manure from above, we raise a plank in the floor. Some of these sheds are erected near our hay-barns, where we can take advantage of the rising ground to obtain access for the sheep to the upper story. At other places the ground is artificially raised at one end, as in the accompanying draft." It is proper to remark that the upper floor should be so tight that the manure and urine should not fall on the sheep below, as it would injure their fleeces.

Sausage Cutter.



14—SAUSAGE CUTTER.

The annexed cut represents a valuable machine for cutting sausage meat, where the business is extensively carried on. It is very generally used in the New England states. It makes a great saving of labor over the old mode of chopping. One man can cut from eighty to a hundred pounds of meat an hour. The teeth being set spirally round the cylinder, the meat is conveyed, in turning it, from the place where it is put in, to the opposite end of the machine, where it is discharged through an orifice in the under side. It is made sufficiently fine by being once passed through. The price of the machine is $12.50. A smaller kind, which will perform the work by the meat being passed twice through, is sold at $5. For sale at the Albany Agricultural Warehouse.

The Farmer's Note-Book.

Culture of Cotton.

We have lately received a pamphlet on the composition of the Cotton Plant, with suggestions as to the use of manures, and the proper cultivation of the crop. The author is Thomas J. Summer, Esq., of South Carolina, who carried on his analytical investigations in regard to the subjects here treated of, in the laboratory of Liebig, in Germany, and we are informed that the correctness of the results is sanctioned by that celebrated chemist. The work, however, is not offered as the basis of a new theory for the production of cotton, but merely as suggestive of a more profitable mode of cultivating the plant. After having stated the result of the analysis of the plant and the seed, the author submits some remarks in regard to cultivation and manuring, which are deserving the attention of every cotton planter. His first suggestion is the adoption of a system of *fallowing*, for which he gives the following reasons :—

" A system of tillage, which carries away annually so large a portion of these natural essentials to vegetation, and which provides no means of returning them, must necessarily impoverish any soil. A fixed principle in the agriculture of all countries where the prosperity of the future has been at all regarded, has been, the gradual but certain improvement of the soil. This is necessary for the support of increased population, and in the slave states, where there has been such an extraordinary and rapid increase of the laboring population, it should never be lost sight of. The intensity of our southern sun-shine, prevents, in a great measure, the annual coat of grass which supplies vegetable matter to the soil in northern climates, and the never-ending occupation of the soils, by our system of culture, prevents the natural improvement which in other countries is carried out by fallowing. We are well aware that fallowing is generally objected to in the south, and we think where fallow is converted into pasture land, and taxed during the whole season for the production of herbage to sustain greedy herds, the system might well come into disrepute. Planters too, object to fallowing, and say they have not land enough to allow one-half to lie idle, but reason and justice to the noble occupation of agriculture, allows this objection to pass unheeded; and its fallacy is proven by the desert wastes of "*old fields*," an agricultural feature only common to the New World, and we blush to say it, only visible to the southern planting states. In Europe, where arable soil compared to population, is a thousand times scarcer than in the southern states, the agriculturists find fallowing a remunerating system. It is but little understood in American agriculture, and we may be pardoned for giving the proper details for fallowing, believing it to be the *cheapest* manner of renovating our soils. A field intended for fallow, should be deeply plowed in mid-winter, the deeper the plowing the better. This is simple preparation, but nevertheless, necessary; and above all things, keep every description of stock off the field. The porousness of the soil will facilitate the assimilation of the natural salts of the earth, and atmospheric action, with the dissolving influence of the rains, will generally bring to the aid of the succeeding crop, a sufficient quantity of these for its production. Late in autumn the herbage should be turned under. This process exerts a chemical and natural influence beneficial to the soil; first, as by decomposition of vegetable matter carbonic acid is produced, which is known to act as a powerful solvent of phosphated alkalies; secondly, those portions of the grass and weeds, not readily decomposable, when admixed with the soil, gives it that friability so necessary to easy tillage, and thus aids the agriculturist in his future labors. A system of green fallows might, by the aid of the Black and Red Tory pea, be judiciously adopted in the cotton growing states. Owing to their imperviousness to wet, they can be sown in mid-winter, and vegetating in the spring, without the aid of cultivation, generally make, upon ordinarily productive land, a sufficient crop to protect it from the sun in summer, and smother out those weeds which are such a pest to cultivated crops. The constituents of the Indian pea—known to be in a great measure derived from the atmosphere—would, in all probability, furnish a better green crop for subversion, than the natural grasses and weeds."

As an auxiliary to fallowing, he recommends the application of compost of muck, leaves, and other vegetable matters, with animal excrements; also bones, guano, wood ashes, and lime. He recommends dissolving the bones according to the mode practiced by Prof. Liebig, as follows:—" Pour over the crushed bones or bone ashes, half their weight of sulphuric acid, diluted with four parts of water, and after they have been digested for twenty-four hours, add one hundred parts of water; sprinkle this mixture over the field immediately before plowing. By its action, in a few seconds, the free acids, uniting with the bases contained in the earth, a neutral salt is formed, in a very fine state of division. Experiments instituted on soils, for the purpose of ascertaining the action of manure prepared in this manner, have distinctly shown that neither grain nor kitchen garden plants suffer injurious effects in consequence, but that, on the contrary, they thrive with much more vigor after its application."

Culture of Potatoes in Kentucky.

Eds. Cultivator—The rapidly increasing trade and population of New Orleans, together with the immense floating multitude upon our western waters, renders the potato crop one of considerable importance.

Up to the 4th of November, of the present season, *thirty-five thousand eight hundred* barrels, are reported to have been shipped from the port of Louisville, nearly all of which were raised within the immediate vicinity of the city, several individuals having planted *one hundred* acres each.

As our mode of cultivating this crop differs in some particulars from that practiced in some other portions of the Union, I will briefly describe it.

The variety now mostly esteemed and cultivated, is the Neshannock or Mercer, producing a small top, and the tubers forming immediately at the base of the vines, they occupy less space than most other kinds. None but the best and largest seed should be planted. The old and long cherished plan of planting "*in the dark of the moon in June*," has mostly been abandoned, and they are now planted as early in the spring as the ground is in a fit condition to work. It is thoroughly plowed, as deep as it can conveniently be done, and harrowed. The rows are then laid off with a two-horse plow, about two and a half feet apart. The seed should be cut into pieces of two or three eyes each, and exposed to dry for several days before it is planted. The pieces are dropped about eight inches apart in the rows. The covering is done with a one-horse plow, throwing a full furrow. As soon as the plants begin to appear near the surface of the ground, the whole is again harrowed across the furrows, leaving the ground level, and entirely destroying the young weeds. In eight or ten days the cultivator is passed twice between the rows; and when the plants have reached the height of eight or ten inches. they are braced up by throwing with a single plow, a moderate furrow on each side. This again covers and destroys the weeds. The crop is now "laid by," except in some cases where it may afterwards become necessary to "chop out" some of the largest weeds.

The harvesting and shipping commences about the 1st of July. The ground that is in good condition, when the crop is removed by the 20th of the month, is then set in cabbages. The plants being quite old, and ten or twelve inches in height, thereby securing two crops in the season from the same land.

Some good gardeners have adopted the plan of planting two-thirds of their ground designed for melons in potatoes, omitting the rows where the vines are to grow. Before the melons require the ground, the potatoes are harvested, leaving the ground in fine condition for the coming crop.

That portion of the crop designed for winter use, is suffered to remain in the ground until fall, and is less exposed to injury from heat than when harvested sooner. In gathering, a two-horse plow is run immediately under each row, and when well done, but little labor is required to complete the work. H. P. Byram. *Louisville, Ky., Dec.*, 1848.

Progress of Agriculture in Ohio.

Perhaps there is no subject more appropriate to the opening year, than some account of the condition and progress of this earliest settlement of the now great state of Ohio.

It is not necessary to speak much of the past—the enterprise, bravery, industry, privations, and suffering, of the hardy and distinguished pioneers of the old county of Washington—are they not written in the chronicles of our common country, to be known and read by all men?

They were, many of them, fresh from the battle-fields of the revolution, and with a noble daring they sought to establish, upon these rugged hills and within these fertile valleys, the comforts and institutions of their New-England homes. The measure of their success can only be ascertained by observation of the present. Their children's children, with such others, also worthy, as have been gathered from the four quarters of the globe, are here to-day, all Ohioans—bound in sympathy and destiny to this, now perhaps, second state in the great confederacy.

There are, however, many things which we may learn from you of New-York, and the rest of the country, and hence we rejoice in the circulation of "The Cultivator," a *national periodical*.

We have in this county over seven hundred square miles of territory, occupied by nearly thirty thousand inhabitants, in the main, intelligent, moral and thrifty. The vacant lands are fast being taken up by emigrants from Eastern Ohio and Western Pennsylvania, owing to their comparatively low price. Increased attention is being devoted to the growth of wheat; to this end, the culture of clover is attracting far greater attention than formerly.

In many parts of our county, the *skinning*-system has so long prevailed, as to open the eyes of our farmers to the necessity of reclaiming the pristine fertility of the generous soil. A plan, adopted successfully, is, to sow clover upon wheat, and before sowing again, permit a crop of clover to ripen and bear seed, to be turned in; and thus the land is enriched and seeded by the same process. If with this treatment, lime could also be used, of which we have great abundance, the advantage would, doubtless, be far greater.

Most of our soil retains its virgin richness, and hence we have not studied with Flemish care, the art and economy of saving and applying manures best adapted to the soil and crop; but as necessity is the great mother of invention, doubtless we shall improve in this regard.

This is not regarded as the most favorable part of Ohio for raising wheat, corn being the leading staple; yet an improved husbandry will increase our wheat crops greatly; and in this, our Scotch fellow-citizens are good examples.

You are aware that we have an Agricultural Society in successful operation, and during the past summer we organized and sustained a Horticultural Society with great interest. There is also a District Agricultural Society in the county, embracing four excellent townships. It is somewhat difficult to arouse the public attention to an adequate appreciation of the importance of these organizations. In this, New-York challenges our admiration and emulation. We are endeavoring to glean some of that knowledge, which is said to be power, from the wisdom and experience of the rest of the world. There are, however, too few copies of The Cultivator, and of our own Ohio Cultivator, circulating among us.

It is hard to convince some of our sturdy yeomanry, that these periodicals deserve as much attention as the light and fashionable literature, which, when exclusively read, unfits our sons for the plow, and our daughters for the homely comforts and duties of the farmer's fireside. Yet, on the whole, we are making some advance in knowledge, skill and enterprise; we have but little of that weak and foolish pride in this community, which regards agriculture and the mechanic arts as degrading; most of our people regard honest industry as the true source and emblem of honor. Darwin E. Gardner. *Marietta, Ohio, Nov.* 28, 1848.

Northern Corn in Mississippi.

The corn I obtained from New-York, I planted, and upon my word I do not think one ear in 25 was sound enough to gather; I cannot understand it. It matured much earlier than our Southern corn; did not grow over 6 to 8 feet high the highest, and had, I should think, generally 2 ears to a stalk. I had it planted so thick that some friends asked me if it was a variety of sugar cane. Rows were laid off 3 feet distant, as accurately as we could; 4 grains were dropped about every 18 to 24 inches, guessed at, though I dropped the most of it, myself; plowed once and hoed twice, and the only clean piece of land I have. The land was rich, well plowed, and corn covered with the hoe.

I did not pull up a stalk, nor take off a sucker; sometimes only one grain vegetated, sometimes 2, 3 and 4 did, and I might say the average was 3 stalks. I counted 8 good ears in one hill, and intending at the time to notice particularly when gathered, I would not affirm, that there were many with 8 ears, but if there had been any stalks without ears, I know I should have noticed them, especially as some one or more friends went through the patch after out of milk, noticing as to firing of the blades. I assure you, the blades began to dry up at the ends, sometimes one part of the stalk and sometimes an other—not a fired blade did I see.

I had some Northern yellow corn, which had been planted in Mississippi a few years; it was intended to have been 3 by 1, but I lost my first planting by letting the corn lie too long in strong saltpetre brine, and when planting the second time I had not enough seed to sow it in drills thick enough, and it was very badly injured by the weevil, and much never vegetated. The consequence was, I had a bad stand. Upon the top of this, a storm blew it down very badly, the stalk being very small. I did not measure the land, as the experiment was not fair. I therefore guessed at it, and think I gathered 50 bushels from each of 2 acres, whereas my crop that adjoined, no interval, produced 35. I showed this piece of corn to several, and defied them to show any difference, as to firing or less yield of ears, than in the other corn, planted 4 by 18 to 20 inches. I had manured the land, plowed with two horses, subsoiled with two, harrowed, scattered more manure and plowed it in lightly, harrowed level and marked out rows with a bull-tongue plow, dropped seed about, or over half bushel per acre, and covered with the harrow. The bull-tongue was run round when just up, scraped out with hoe, the sweep was used twice I think, and the hoe once more, but the last hoeing and sweeping was only done because it was a part of the field and the hands went through the whole. I believe that upon the same quality of land, same manuring, same corn, same season, and similar culture. that we can make as much corn in lat. 32°, as you can, or anybody else, anywhere else. I may err of course, but ridicule, nor assertion of all scratching experiments will not change me in my opinion. M. W. PHILIPS. *Edwards, Miss. Nov.* 10, 1848.

On the Culture of Sunflowers.

EDITORS CULTIVATOR—In your October number are some inquiries on the culture of sunflowers. I have formerly raised them in quantities of a few bushels, annually, though without any very accurately conducted experiments. In the choice of soil, mode of planting, (as to depth, distance, number of spires in the hill,) and cultivation, I treat them exactly as I do corn. In an ordinary soil and season, the heads will measure from six to ten inches in diameter, though sometimes they will reach fourteen.

As soon as some of the ripest heads begin to shell out, I commence gathering, by cutting off the heads short with a knife, dropping them into a basket. A few of the greenest ones must be left for a second gathering. If they are well ripened, and the weather be dry when they are gathered, they should be shelled at once. This is done by holding the head in one hand, while with a coarse curry-comb you shell them out with the other. If you attempt to thresh them with a flail, a portion of nearly every head will prove stubborn, and many of the seeds will be broken. The heads are so very fleshy, and mould so readily, that it is very difficult to dry them in the interval between gathering and shelling. After shelling, spread and dry them partially; then winnow, and then dry thoroughly.

All sorts of domestic animals are fond of them after a little use, while in a family of nut-loving children, they are scarcely less acceptable than beech and hazle nuts, especially when they are large and well-ripened. I can state nothing of their yield per acre, but should think them not inferior to corn, under similar circumstances.

After the seed is gathered, pull up the hills, let them dry a few days, until the earth will shake from the roots freely; then stack and dry for oven-wood, as the stalks are too woody and stubborn to decay readily, and plow into the soil. Plant only the single-headed variety, as it will require much more labor to shell the many-headed, while the yield of seed is no larger.

I know nothing of the best method of hulling, preparatory to bruising the kernels for oil. I would suggest, however, that the ordinary cast-iron bark mill, used by tanners, would probably hull them safely, as the seed, when thoroughly dried, shrinks greatly in the hull, and might probably open without breaking the kernel. C. E. G. *Utica, Nov.*, 1848.

NOTE.—There is one fact that I have not seen noticed. I have often found the sunflower covered quite thickly, very late in the season of vegetation, with the yellow-striped cucumber bug lodged on the lower side of the head. Whether they were seeking food, or a place of deposit for their eggs, I could not determine. I have not observed that they injure it while young.

Effect of Drainage.

I have a place on the Hudson river, through which a brook runs, which, in various ways, is the greatest ornament of the grounds. The brook takes its rise chiefly in a swamp, about three-fourths of a mile from the river, containing about one hundred and fifty acres, surrounded nearly on all sides by high hills, from springs in which, I suppose, the water in the brook is mainly supplied. At its outlet, there is a descent probably of thirty or forty feet, in a distance of ten or fifteen rods, so that the swamp can be easily drained, by cutting a deep ditch around it, and by this means bring into cultivation, as good a piece of land, as there is in the county—which at present, is worth little or nothing. I own a part of this swamp, but have been thus far deterred from taking any step to have it drained, from a fear that it might reduce the quantity of water in the brook—a result, for which any increased value of my portion of the swamp, would be no compensation. Whether such would be the result, or whether on the contrary, the quantity of water in the brook might not be increased, by confining that of the swamp to the ditch, and thus dimish the surface exposed to evaporation, is what I have no means of deciding by any experience of my own, or that of persons in my neighborhood.

The object of this communication is, to obtain such information as will guide me in this matter. HENRY SHELDON. *New-York, Nov.* 13, 1848.

[We do not think the drainage of the swamp would tend to reduce the quantity of water in the brook; on the contrary, the drains, if directed into the channel, would probably throw into it a greater quantity.—EDS.]

Deep and Subsoil Plowing.

On page 334 of the last volume of The Cultivator, I find an article on subsoil plowing, by JOHN MALLORY. I have never met with any thing that in general so completely harmonises with my own views on that subject. I think so well of the piece, that I should be glad if it could find its way into many other publications. There is no subject that could be presented to the farmer of greater importance. I speak not from theory alone, but from practice. I think the two first paragraphs of the article ought to stand as a frontispiece to every agricultural work.

Permit me to give a little of my own experience, and in that I shall be obliged to differ with Mr. Mallory as to *time*. He speaks of having subsoiled in June an ind May, and recommends spring or fall or any time in summer. Here I disagree with him, especially in regard to such land as he speaks of—*swale*. Where the climate will permit, the month of December is the proper time, or in other words before the frost sets in, and if the land is naturally inclined to be wet, the wetter when plowed the better. The plowing ought to be done with team strong enough to turn up from twelve to fourteen inches. The first grand agent is the frost, which will entirely change the character of the soil; it will become pervious to air and moisture; the subsoil will become mingled with the top-soil, and that which was barren will become fruitful.

Now we perfectly agree, that the interest of the farmer requires that the soil be made deeper. Mr. Mallory's plan is to do it in summer, with two plows, leaving the subsoil broken up, but still below the surface-soil. This may answer where the land has a larger proportion of sand or gravel; but where the subsoil is a stiff blue, or red clay—sometimes a potter's clay—impervious to water, it will be inclined to run together, not having been removed from its former position, or mixed with the top-soil; and if it was thrown up in summer, the sun's rays, on a moist, stiff subsoil, harden it, and render it unfit for the roots of plants.

Remember I am speaking of a stiff clay, or wet meadow ground. My plan is to plow late in the fall, with a large plow, when the ground is wet, twelve inches deep, and throw the subsoil on the top as much as possible. It may freeze or thaw two or three times, in the course of the winter. In the spring, that which before looked as if it was very unsuitable for the growth of plants, is now changed, crumbling all to pieces, and readily mingling with the top-soil. Here, you have new land again, and as soon as it is dry, you may prepare it for whatever crop you think proper. If your object is to improve the land, leave it for rye, in August. or wheat, in September. Be sure never to work it when very wet, in summer. Harrow in April, plow in May, harrow in June, and again before sowing. Put on eight quarts of timothy to the acre in the fall, and the same quantity of clover in the spring. Again, I say, if you want to improve the soil, have a good coat of grass to turn down the next time.

In December, 1847, I plowed about eight acres, from eleven to twelve inches deep, part of which had a dressing of sand and lime. It was planted to corn. We have just done taking it in. It made twelve barrels to the acre, which is at least a fourth more than any field in the neighborhood, worked in the common way, where the plowing is done about six inches deep.

I should be decidedly in favor of making the time of plowing late in the fall, or just before frost sets in, as this will apply to different climates, and, as I said before, the wetter the better—the work to be done at one plowing, which can only be done in this part of the country when the ground is wet. We cannot plow twelve inches at any other time, and, besides, we are opposed to plowing while the ground is wet in summer.

I was so pleased with the article before alluded to, that I could not refrain from noticing it, and if any hint has been given that will tend to illustrate the subject, I shall be gratified. WM. TODD. *Utica Mills, Frederick county, Md.*

Comparative Value of Crops.

We have received from JOHN W. PROCTOR, Esq. the report of the committee of which he was chairman, appointed by the Essex County (Mass.) Agricultural Society, to consider the "comparative value of crops as food for cattle." From the want of actual data, the remarks of the committee are given rather as suggestions, than as the embodiment of ascertained results. The subject is one of very great importance, and any observations tending to elicit facts in regard to it, must be useful.

We give the following remarks from the report in regard to the comparative value of beets and carrots. As to the production of milk from the sugar beet, we found in a trial of them, several years since, with three cows, that though the quantity of milk was as great as when the cows were fed with the same quantity of potatoes, the amount of *butter* obtained was considerably less. The beets did not impart richness to the milk:

"Carrots and beets are cultivated to some extent to help out the feed of our animals. Is there any one of our farmers who can answer with confidence, which of these is most worthy of cultivation? Satisfactory experiments to determine this would be of great value. We have used them both, to some extent, and will state such impressions as have arisen from this use. We have found the *sugar beet* one of the very best vegetables for the production of milk; far superior to the *carrot*—which is thought by some to be the very best of feed for milch cows. We have found the carrot better for fattening than for increasing the milk of animals. We speak of the sugar beet, in preference to the blood beet, because it grows more abundantly. There are other considerations to be taken into view, in determining which of these vegetables is most worthy of cultivation, as well as the effect on the animals fed by them. We have found the carrot to yield the most, and to leave the land in the best condition, especially for the succeeding crop. Almost all other crops will grow well after the carrot; few will grow well after the beet. The carrot will grow well successively, year after year; the beet will not. The carrot requires less manure than the beet. What kind of crop, therefore, it will be most judicious to plant, will depend upon the combined consideration of the quality of the article grown; the labor and expense of growing; and the contemplated future use of the land. In our remarks upon the comparative cultivation of the beet and carrot, we do not intend to speak with that confidence, which should be a rule for others; all we intend is, to induce others, if possible, to make such observations, as will relieve them from the uncertainty under which we labor."

The report gives the following judicious remarks in regard to feeding stock: "Our impressions are, that a mixture of feed is preferable to any one kind exclusively. English hay should be the basis for winter, and Indian corn or meal the first accompaniment. Vegetables may be advantageously used, when combined with Indian meal. No stock can be fed, in the most successful manner, without a fair portion of this indispensable ingredient. It is to the animal, what steam power is to the traveller, the most certain means of going ahead. But whatever may be the kind of food used for the feeding of cattle, of this we feel confident, that it should not be sparingly used. Feed full, or not at all, is our motto. It is the worst possible economy to scrimp the feed of cattle, or to attempt to impose upon them a kind of food of ordinary or mean quality. How much time is annually wasted in gathering in the coarser grasses from the meadows, and forcing them down the gullets of animals, when their knees have hardly strength sufficient to support their emaciated bodies. If such kind of feed is to be used at all, it should be chopped and mixed with something nutritive, so that the animal may strengthen and thrive thereby. He that withholds from his beasts any portion of a full and generous feed, whatever may be the use he contemplates to make of them, in the same proportion diminishes his own income."

Farming and Fishing on Long Island.

My farm lies on the east end of Long Island, in the town of Southold, Suffolk county. It consists of eighty acres, ten of which are salt meadow, the residue good tillable land. We get from 100 to 200 bushels of potatoes, or 50 bushels of corn per acre. After these crops are off, in the fall, we usually sow wheat with timothy and clover. Wheat yielded last harvest, 28 to 35 bushels per acre. We likewise raise large quantities of Russia turneps, [ruta-baga?] which are sent to the New-York market, and fetch from 25 to 50 cents per bushel. They yield from 300 to 600 bushels per acre.

Last year I had six acres in potatoes, six in corn, six in wheat, two in rye, three and a half in oats, one and a half in turneps. I raised 170 bushels of wheat, 30 of rye, 150 of oats, 300 of corn, 850 of potatoes, 300 of turneps. I cut 20 tons of upland hay, and 10 tons of salt meadow. I have kept six cows, one yoke of working oxen, eight yearlings, four calves, three horses, one yearling colt, and twelve sheep. I sold a yoke of oxen in June, for $154. I fatted one yoke o.

oxen, and one cow, five old hogs and four shoats—raised in all twenty-nine pigs.

The farm is bounded on the south by a small bay, where there is an abundance of sea-weed, fish, eels, clams, &c. There were taken in this bay, in a few days last season, nearly one hundred thousand poggies, which were sent to New-York, on the Long Island railroad, and brought over one thousand dollars. We likewise take great quantities of white fish, which we use mostly for manure. There have been taken in our harbor, in the months of May and June, over eight millions of these, in shoals of from one hundred to forty thousand at a draught. Our seines are from 150 to 250 rods long. They are drawn with horses, around a capstan. We generally spread the fish among the corn and potatoes, at the rate of ten to twelve thousand per acre. T. V. Tuthill.

Experiment with Muck.

Editors Cultivator—I have made some experiments the past season to test the value of muck as a manure, and am satisfied that four loads of muck are of as much value as three loads of barn-yard manure. I drew the muck from the swamp, as I had opportunity during the winter, and put it in large heaps in the field—two loads of muck to one of manure, and planted to corn. The yield was about 50 bushels shelled corn per acre. The soil was sandy, the subsoil in part lime rock, slate rock, and gravel. On a part of the field I put nothing but muck; there was no perceptible difference in the corn during the summer; but on husking the corn, the ears were better filled out on the part where there was nothing but muck, occasioned, no doubt, by the muck keeping the ground more moist, as the season has been *very dry*. I think that at least one-third of the crop is to be attributed to the muck. On the part of the field where I put no manure, I put about a quarter more muck than I did where I put muck and manure. In cultivating corn, I use nothing but the cultivator, and I go through the corn three times, both ways, each time pull out all the weeds from the hills. I would not thank a man to make a hill around corn for me.

Precaution.—Any one that tends a threshing machine, ought to take a fine sponge and fit it to the nose and mouth. Moisten it, and let a string pass from each side of it to the back part of the head, and tie them together. A man thus prepared can work for hours in a perfect "smudder," without experiencing those disagreeable sensations that are always felt after working in the dust, without such precaution. I have been in the habit of thus using a sponge for the last twelve months, when I tend threshing machine. I would rather give one dollar per day, than tend a machine without it. I first got the idea from the Cultivator. Henry Keeler. *So. Salem, N. Y., Dec.*, 1848.

On the Culture of the Potato.

Eds. Cultivator—It has long been a prevalent opinion with our farmers, that seed potatoes should be selected from the largest and best. But a gentleman of my acquaintance, the owner of a large farm in the county of Worcester, in the spring of 1847, found his stock of large potatoes completely exhausted, and from the general scarcity, could not renew his supply. He then determined, from necessity, to plant his fields with small ones, varying in size from a marble to a small pullet's egg, placing two or three, without cutting, in each hill. The result was an unusually fine crop, in size, quantity and quality.

In the spring of 1848, he repeated the experiment, so far as to plant alternate rows of small ones and large ones, cut into four or five pieces. I was present when he was harvesting the crop, in the early part of October, and it was evident that the produce of the small potatoes exceeded that of the large ones. Should further experiment confirm the fact, that the small are of greater, or even of equal value for seed, it will be of some importance to farmers in this section, for the summer drouth frequently causes a withering of the potato vines by the middle of August, so that there is no subsequent growth of the roots, giving a large proportion of small ones; these have been claimed by the hogs.

Prior to the "potato rot," large quantities were imported from Maine, and the British Provinces, and with our own produce, established a price of 20*a*33 cts. per bushel. For three years past, the importations have been extremely small, and from the loss by rot, the price has been 80 cts. *a* $1.50 per bushel, an expensive article of food for hogs. M. B. *Beverly, Mass., December*, 1848.

[Our correspondent relates an experiment in raising potatoes from *sprouts*. It may not be generally known that potatoes can be readily propagated in this way, if care is taken not to mutilate the sprout in planting.]

The Mount Airy Agricultural Institute.

We make the following extracts from a letter recently received from John Wilkinson, Esq. the principal of this institution, from which it will be seen that he is going on prosperously with the good work he has undertaken: He says:

"We have now thirteen regular students, besides those from the village who attend the lectures. A more amiable, virtuous, studious and industrious class of young men never were collected—among them one sent by the Brazilian Government, a liberally educated and very intelligent and worthy gentleman, who designs to return to his own country, to found an Agricultural College there. The prospect is that we shall have as many as we can accommodate during the next summer session.

"My class all participate in every branch of farm labor, and are each required to lecture on mathematics and such of the natural sciences as they are pursuing. They are taken into the laboratory, and assist in making and repairing apparatus and preparing tests and analyses, and in short every manipulation of the scientific department. About four hours per day are spent in the practical operations of the farm; the balance in the literary department. Two or three evenings of each week are spent in the discussion of the practical subjects of the farm, in which the students all participate, and they are very interesting, as there is a great strife to excel in the discussions.

"The winter has been remarkably open; we have been plowing for the past two weeks for the spring crops. The fall has been very dry; springs and streams were never known so low at this season of the year. I have grown, this year, about 1200 bushels of Potatoes, and 800 of carrots, all sound and good."

Wild Lands of Kentucky.

In the November number of the Cultivator, is a piece by B. headed "Kentucky Wild lands" in which the advantages of purchasing and improving these lands, "rather than go on to the prairies of the wide west," are fully and justly set forth. In our section of the state, from three to four hundred miles by water, below those recommended by B. are large bodies of unimproved lands, near the Ohio and Green rivers, which can be purchased at very reduced prices, and made to yield by judicious management, large profits. The larger portion of our lands are level or undulating, and all capable of being brought into cultivation, much of it admirably adapted to meadows, and there is no crop cultivated in the west, requiring so little labour, that has, and probably will continue to yield as good a profit as hay, baled and shipped to the South. Other portions of our land, are more broken and adapted to grazing, and the cultivation of the grape. Our location is about 37½ degrees of North latitude; and the principal crops now cultivated for market, corn and tobacco. We are also so low down upon the Ohio river, as to possess great advantages, over those living on the upper Ohio, in getting our produce to market, during a low stage of water. I think our lands are peculiarly adapted to an industrious German population, possessing some means for purchasing and improving them, yet such appears to be their aversion to settling in a slave state, (if B. and many others, are correct in their belief, this cause of aversion will soon cease in Kentucky) that they buy lands in Indiana, from $6. to $10. per acre, which are not better located, and frequently of very inferior quality, to those that could be purchased on our side of the river, at from $2. to $4. per acre. There are the same advantages here, to make the timber pay for the land, as those in the upper part of the state, as mentioned by B. A tract of about 4000 acres of land, fronting nearly two miles on Green river, about two miles above Lock and Dam No. 1 where a grist and two saw mills are located, 10 miles above the mouth of the river, and 15 or 20 miles above Evansville, a very flourishing town in Indiana, rapidly increasing in population and located at the termination of the Erie and Wabash canal, upon the Ohio river, can now be purchased, if taken altogether, at $2 per acre; the tract is unbroken and can all be improved and cultivated. Many other tracts can be bought on as favorable terms. There is a vast field of coale under all this region of country, which is seen near the surface in many points among the hills on Green river and other parts of the country, and which, I should think, is worth the attention of capitalists. A. *Henderson, Ky. Dec.* 1848.

To Build a Rat-proof Granary.

EDS. CULTIVATOR.—Having noticed in one of the nos. of your Cultivator, an inquiry for a "Rat-proof Granary," I offer the following cheap, simple and effectual plan, which you can place before your readers, though I fear I am too late to benefit my Brother Farmer who applied to you; but he is not the only one who is intruded upon by these unwelcome visitors, therefore I feel myself called upon to save all the corn I can, for those who have to build cribs:—Take locust posts and place them in the ground as deep as you may wish; saw the tops off smooth, and build on your crib, 3 or 3½ feet above the ground; and then around the posts, which must be barked smooth, nail tin; and when the rats climb up to it they will tumble down, finding no foot hold. The building must not be attached to any other building, or to any fence. A YOUNG FARMER. *Willow Bottom, Md., Dec.* 2, 1848.

Benefit of Example.

Being among the number "who have gone to farming from the shop, store, offices, &c.," I have been much interested in the details of farming by experienced and successful farmers, that have appeared in the last volume of the "Cultivator,"—those relative to the author's own operations, and the editorial descriptions of farms and farming by men in various parts of the country. Very few of us are at leisure to visit the different farms at the season of active operations, and must, but for those descriptions, be satisfied with such examples as appear around us, many of which are certainly not the most perfect patterns of good farming. I think we are most apt to adopt the example that meets us at the moment when we wish to put it in practice, if it is not palpably wrong—not recalling, in the hurry of business, the many better ones that we have met with before. Here is one of the advantages of the "Cultivator,"—a text book always at hand; and any one may *take* time to look at the index and find each article that has a bearing upon the business he is engaged in, from which, together with his neighbor's operations, he may select the best way. Theory won't answer then; it is practical details and results that tell. Theory is let alone to talk about at leisure.

The influence of one *good* farmer among his immediate neighbors, is greater than is generally supposed. I am led to think so from what came under my observation when a boy. My father, (whom I always set down as a good farmer,) purchased a farm in a neighborhood where the farms had descended from father to son, and the modus operandi was among the "appurtenances" bequeathed. Each innovation of my father on old customs, was hailed with a sneer and a —"guess he will get sick of *that*." The muck was "cold stuff," the ashes would "kill the corn," the plaster "ruin the land," the cultivator was "not half so good as the plow," the spring-tooth rake "spoiled the hay, and would be torn all to pieces before haying was over." When asked to take an agricultural paper, the reply was,—"We know more farming than we can do now." But they were men who looked to the interest of their pockets, and could not fail to see that my father's crops were ahead of theirs, with less advantages for manure, and that he was ahead of them in his work with less help. The consequence was, one after another might be seen starting the team for the muck-swamp, but stealthily, as a dog bent on mischief. The cultivator, the horse rake, &c., were purchased and brought home in the night, at first, that the neighbors might not see them. One or more agricultural papers are now taken in each family. They have found that although they knew before, "more farming than they could do," much of it may be unlearned, and what *needs* to be done, may be done quicker and better by adopting the improvements of the day.

I left home while young, and have not my father's example fresh before me; and, as I before said, examples of good farming are not as frequent as they might be; I, therefore, on receipt of my "Cultivator," seek first and most anxiously for such examples from you and your able correspondents. I trust the interests of farmers, young in experience, like myself, will not be forgotten in the forthcoming volume. O. W. EDSON *Chester, Vt., Dec.* 8, 1848.

Judicious Improvement.

The Report of the Committee on Farms for the Hartford County (Ct.) Ag. Society, 1848, gives the following sketch of the farm of MARVIN SEXTON, of Simsbury, to which the first premium of the Society was awarded. "Mr. Sexton purchased this ground about fifteen years since, principally on a credit, and with a large debt upon him, which he has gradually liquidated. He has with good judgment and untiring industry, accomplished in the way of improvements what is truly wonderful, and indeed, had not some of our committee well known the facts, what would be incredible. When Mr. Sexton went on to this land, several of the lots were so covered with stone that it was exceedingly difficult to cultivate them; other portions were swampy, covered with bushes and bogs The stones have been drawn off and made into substantial wall around lots of various sizes, from four to ten acres—the swamps thoroughly drained with deep ditches, the bushes cut, the bogs cut up, piled and burned; in short, much of the land had been reclaimed and improved in a manner that would lead one to suspect that the owner must have had bank stock to have drawn upon to pay his workmen. We found his barns well filled with good hay, and his teams and young cattle in good condition. Mr. Sexton has built 533 rods of wall, and put in new posts and rails for 100 rods more. He has also made over 100 rods new rail fence, besides rebuilding 220 rods worm fence. The fences, and indeed most of the other improvements, have been made within the last five years."

Domestic Economy, Recipes, &c.

Cookery—Boiled Meats, &c.

We should be greatly obliged if some of our Farmers' Wives or Daughters, would supply us with matter for this department of our paper. For want of something from them, we copy the following, from Miss Beecher's excellent "Domestic Receipt Book:"

To Boil a Turkey.—Make a stuffing for the craw, of chopped bread and butter, cream, oysters, and the yolks of eggs. Sew it in, and dredge flour over the turkey, and put it to boil in cold water, with a spoonful of salt in it, and enough water to cover it well. Let it simmer for two hours and a half, or if small, less time. Skim it while boiling. It looks nicer if wrapped in a cloth dredged with flour.

Serve it with drawn butter, in which are put some oysters.

To Boil Corned Beef.—Put the Beef in water enough to cover it, and let it heat slowly, and boil slowly, and be careful to take off the grease. Many think it much improved by boiling potatoes, turnips, and cabbage with it. In this case the vegetables must be peeled, and *all* the grease carefully skimmed as fast as it rises. Allow about twenty minutes of boiling for each pound of meat.

To cook a Ham (very fine.)—Boil a common-sized ham four or five hours, then skin the whole and fit it for the table; then set it in an oven for half an hour, then cover it thickly with pounded rusk or bread crumbs, and set it back for half an hour.

Boiled ham is always improved by setting it into an oven for near an hour, till much of the fat fries out, and this also makes it more tender. Save the fat for frying meat.

Bologna Sausages.—Take equal portions of veal, pork, and ham, chop them fine, season with sweet herbs and pepper, put them in cases, boil them till tender, and then dry them.

Eastern Brown Bread.—One quart of rye.

Two quarts of Indian meal: if fresh and sweet, do not scald it; if not, scald it.

Half a tea-cup of molasses.

Two teaspoonfuls of salt.

One teaspoonful of saleratus.

A tea-cup of home-brewed yeast, or half as much distillery yeast.

Make it as stiff as can be stirred with a spoon with warm water. Let it rise from night till morning. Then put it in a large deep pan, and smooth the top with the hand dipped in cold water, and let it stand a while. Bake five or six hours. If put in late in the day, let it remain all night in the oven.

Baked Beans.—Pick over the beans the night before, and put them in warm water to soak, where they will be kept warm all night. Next morning pour off the water, and pour on boiling water, and let them stand and simmer till the beans are soft, and putting in with them a nice piece of pork, the skin gashed. Put them into the deep dish in which they are to bake, having water just enough to cover them. Bury the pork in the middle, so that the top will be even with the surface. All the garden beans are better for baking than the common field bean. They must bake in a moderately hot oven from two to three hours.

The best variety for baking is the small white Lima; next to this, the white Cranberry bean.

New-York State Agricultural Society.

Annual Meeting at the Capitol, on the 3rd Wednesday, (17th) January, 1849.

The following committees appointed for the January meeting:

Management of Farms—Hon. A. Van Bergen, Coxsackie; Hon. Wm. Buel, Rochester; Hon. J. S. Gould, Hudson.

Experiments and Essays—Asa Fitch, M. D., Salem; Hon. Geo. Geddes, Onondaga; Hon. S. Cheever, Saratoga.

Cheese and Butter Dairies—B. P. Johnson, Albany; Hon. H. C. Tuthill, Cayuga; A. Doubleday, M. D., Binghamton.

Butter and Cheese—Joseph Alleyn, Rochester; Amos Briggs, Schaghticoke, and Joseph Cary, Albany.

Draining—John Delafield, Oaklands; Roswell Reed, Coxsackie; B. B. Kirtland, Greenbush.

Wool and Wool Depots—Hon. J. P. Beekman Kinderhook; S. N. Dexter, Whitesboro; Hon. D. S Curtis, Canaan.

Fruit—E. Emmons, Albany; D. Thomas, Greatfield; H. Wendell, Albany; J. W. Bissell, Rochester; C. S. Wilson, Utica.

For the best new seedling variety of winter apples, of decidedly superior quality and valuable for exportation; one dozen specimens to be exhibited; together with a history of its origin; a description of the growth, character and habits of the tree, and the growing of the fruit—such fruit to be adjudged by the committee as of the first character for orchard purposes, diploma and $10. For the second best do., $5.

The above new seedling variety to be sent to B. P Johnson, Secretary, Agricultural Rooms, Albany, before the 15th of January, 1849, for examination.

Wheat and Indian Corn—Charles Lee, Penn-Yan; Hon. Tracy Pardee, Batavia; Hon. John I. Brinkerhoff, Cayuga.

Barley, Rye, Oats, Peas and Beans—Hon. O. Hungerford, Watertown; J. W. Ball, Exetor; W. A. McCulloch, Greenbush.

Potatoes and Root Crops—A. Osborn, Watervliet; Robert Harper, Albany; J. W. Haydock, Greenbush.

Corn Fodder, Hops, Clover and Timothy Seed—Col. E. Kirby, Brownville; Hon. Benj. Enos, DeRuyter; Hon. Henry Wager, Oneida.

Arrangements for Pomological Exhibition—H. Wendell, M. D., J. McD. McIntyre, and Jas. Wilson, Albany.

Arrangements for Weekly Meetings during the Winter—Sanford Howard, J. McD. McIntyre and B. P. Johnson, Albany.

Prof. E. Emmons, M. D., is expected to deliver an address on the first evening of the annual meeting. Notice will be given of the subject of the address.

B. P. Johnson, *Sec'y.*

Agricultural Rooms, Dec. 14, 1848.

Ardent Spirit from Milk.—In Tartary, the milk of the mare is converted into a liquor called *koumiss*, which is said to be agreeable to the taste. From this liquor a spirit is obtained by distillation, called *rack* or *racky*

Notes for the Month.

To our Patrons and Friends.

WITH "the compliments of the season" to all our friends, from the "frozen north" to the "sunny south," we have the pleasure of presenting them with the initial number of our new volume,—a number which we intend shall be at least equalled by all the future nos. of the volume, which it is our intention to make, in every respect, superior to any we have heretofore issued; and which we doubt not, will meet the full anticipations of all who shall favor us with their subscriptions. We commence the year, with new and beautiful type, and with an increased number, and a better style of engravings; and our engraver, Mr. FORBES, promises us that the engravings for the next year shall not be excelled by those of any periodical in the country. Its table of contents we think also unusually rich and varied, and admirably adapted to interest, to instruct, and to elevate the character of our rural population; and, take it all in all,—the quality of the paper,—the beauty of its mechanical execution,—the style and number of its illustrations, and the quality and quantity of the reading furnished, it is believed that it will be found such as to deserve a hearty welcome from all its readers, and worthy a place in every farmer's family. We therefore bespeak for it the kind offices of all our friends. It will be remembered that all subscriptions are discontinued at the end of each year, and that we are dependant upon the voluntary efforts of those who so kindly act as agents, for their renewal. Having suffered severely by the late fire, by which our office was destroyed, we shall be particularly grateful for any extra efforts which our friends may be able to make to give The Cultivator an increased circulation the present year.

COMMUNICATIONS have been received, since our last, from T. V. Tuthill, Henry Keeler, H. P. Byram, A., F. Holbrook, H., Agricola, A Farmer's Wife, Wm. Todd, H. C. W., Darwin E. Gardner, M. W. H., M. B., P. Dubois, A Subscriber, A Young Farmer, O. W. Edson, H. S., S B. Buckley, A Plain Farmer, J. R., B., W. Halsey.

☞ We received, too late for this month, a very interesting communication from our friend T. HART HYATT, Esq., United States Consul at Tangiers, on the mate, soil, productions, &c., of the empire of Morocco, which we shall publish next month.

BOOKS, PAMPHLETS, &c., have been received, since our last, as follows: Analysis of the Cotton Plant and Seed, with Suggestions as to Manures, &c. By Thomas J. Summer. From Col. A. G. SUMMER.—Scientific Agriculture, or the Elements of Chemistry, Geology, Botany and Meteorology, applied to Practical Agriculture. By M. M. RODGERS, M. D. Rochester: E. Darrow. From the Publisher.—Transactions Penn. Hort. Society.—Catalogue of the Officers and Students of Yale College, from Prof. NORTON.

PLANTS AND FRUIT TREES.—We failed to acknowledge, as we should have done, in our last no., a box of flowering plants, for our garden, from our friend DAVID THOMAS, Greatfield; and also a package of fruit trees of new and rare kinds, from Messrs. ELWANGER & BARRY, Mount Hope Nurseries, Rochester. They will please accept our thanks.

☞ We will endeavor to make room soon, for the papers enclosed to us by our friend J. P.

E. C. J.—Answers to your inquiries next month.

NEW CORRESPONDENTS.—We are happy in having it in our power, to give the very excellent papers of AGRICOLA, H. C. W., and A FARMER'S WIFE, in this number. We hope they will favor us with frequent contributions to our pages. AGRICOLA we know *practices* what he teaches—H. C. W. though unknown to us, must, we are confident, be a good farmer; as to A FARMER'S WIFE, who furnishes us with one of the best plans we have met with, for a "working-woman's cottage,"—she undoubtedly has "a local habitation and a name," with which we should be happy to be made acquainted.

☞ The attention of all who are disposed to aid in procuring subscribers to "THE CULTIVATOR," is invited to the LIST OF PREMIUMS, given on last page. We hope there will be a spirited competition.

SCHOOL OF APPLIED CHEMISTRY IN YALE COLLEGE.—We would call particular attention to the advertisement of this school, which will be found in the present number. This department has been in operation more than a year, and its success has been greater, in all respects than its most sanguine friends anticipated. In regard to the course of instruction and the general management of the school, we have heard but one expression, and that of entire approbation. It is unnecessary for us to speak of the talents of Professor NORTON, or his acquaintance with the scientific principles of agriculture; his character in these respects is already well known, and the valuable productions of his pen are familiar to many of our readers.

TILE MACHINE.—We are informed that JOHN DELAFIELD, Esq., Oaklands Farm, near Geneva, expects soon to receive from England, one of the most approved tile machines, which will make from 8,000 to 10,000 draining tiles per day.

☞ A pair of remarkably large yearling steers, twins, raised by Mr. HIRAM ACKLEY, of Hamilton, Madison county, lately passed through this city, having been purchased by Mr. F. A. WIER, of Walpole, N. H. They were calved 24th of March, 1847. We did not learn their weight, but we think they are as large as any we have ever seen of their age. They appear to be a cross of the Durham and common stock, are thrifty, and not large-boned for their size.

DE RUYTER INSTITUTE.—We are informed that an agricultural department has been added to this institution. It is under the charge of Mr. GURDON EVANS, Professor of Natural Sciences,—a gentlemen who qualified himself for this station, under the instruction of Prof. NORTON. It is intended to afford farmers the opportunity of obtaining a thorough knowledge of those sciences connected with agriculture. The course for farmers commenced on the 13th of December, and will continue fourteen weeks. Each student spends two hours in each day in the chemical laboratory, where they are instructed in the modes of analysing soils, ashes, &c. A course of thirty lectures is to be given during the term, upon the relation of geology to agriculture, to include remarks on the rotation of crops, manures, draining lands, &c. To students who wish become thorough *agricultural chemists*, a complete course will be given, "beginning with a course of qualitative examinations, followed by a series of qualitative analyses of soils, ashes, minerals, mineral waters, gases, chemical substances," &c. Medical students who wish to acquire a practical knowledge of pharmacy, either before or after attending lectures, will be furnished the facilities for prosecuting the investigation of medical substances, both analytically and synthetically, and at the same time they may pursue their studies under able practitioners in the neighborhood. From what we have learned of this institution, we are favorably impressed with its character, and the advantages it affords for giving instruction in the branches above mentioned.

Potato Rot.—Mr. P. Dubois, of Tompkins county, writes us that he applied a dressing of lime to a part of his garden, and that potatoes planted on this part have not rotted, while those on adjoining land, not limed, have decayed very much. He thinks it was the lime which prevented the attack of the disease; but we have heard of similar trials in many instances in which no such effect was discernable.

Heavy oats.—At the late show at Saint Johns, New Brunswick, three samples of oats which were exhibited, weighed respectively 47 lbs., 46½ lbs. and 44 lbs. the bushel.

Sullivan County Agricultural Society.—The officers of this society for 1849, are Lotan Smith, President; C. S. Woodward, J. C. Curtis, J. M. Foster, L. Moore, G. G. DeWitt, J. C. Voorhes, D. Pierce, Seth Brown, A. Norris, H. Mead, Platt Pelton, Vice-Presidents; John P. Jones, Cor. Secretary; Jas. H. Foster, Rec. Secretary; M. L. Bushnell, Treasurer.

Sympathy between a Horse and Sheep.—Many persons have doubtless seen a portrait of the celebrated race-horse Dungannon, accompanied by the figure of a sheep, the latter having on its side the initials, D. O'K. The following is the explanation of the picture: A drover being on his way with a flock of sheep for market, one of them became lame and unable to travel. The animal was put into a field where the horse above-mentioned was feeding. The sheep recovered, and a singular attachment soon took place between it and the horse. It is stated that such was the affection of Dungannon for the sheep, that, besides sporting with it in various ways, he would sometimes lift it in his teeth, with great tenderness, into the rick, where the groom deposited the fodder. The horse would, also, on all occasions, defend his new friend, and suffered no one to offer him the least molestation. Mr. O'Kelly, the owner of the horse, being made acquainted with these circumstances, bought the sheep of the farmer, marked the wool with his own initials, D. O'K., and left the two friends in peaceable possession of the enclosure.

Cattle in the South.—Dr. Lee says, writing from Augusta, Ga., "common cows nowhere give more than from one to two quarts of milk at a milking. At present (10th June,) cattle are poor, and many have not shed their coats. Indeed, not one animal in a hundred has enough to eat. Short commons have dwarfed them down to about one-third the size of northern cattle."

Climate on Corn.—Isaac Flower, of Erie county, Ohio, speaking of the gradual change in varieties of northern corn when removed south, says, "From sixteen years acquaintance and cultivation, I am prepared to say that the white flint variety seems to bear no similarity to what it was sixteen years ago; it was then an eight-rowed flint corn; it is now some sixteen to twenty rows gourd-seed."

Corn—Thick and Thin Planting.—We have long been satisfied that the more evenly the crop is distributed over the ground, the greater the product. One of the heaviest crops ever raised, consisted of a single stalk to every square foot. Hence drills are better than hills, both being equally well managed—and small and frequent hills, better than large remote ones. S. H. Reed of Bergen, Genesee Co. planted an acre with hills, 3 feet 4 inches by a foot and a half. Another acre was planted 3 feet by 3 feet 4 inches—4 stalks to a hill in both cases. Both were hoed twice, and dressed with the cultivator four times. The product of the close acre was 90 bushels of shelled corn; the other, only 45 bushels. In many instances which have come under our observation, corn planted in drills has usually yielded one half more than in hills, both receiving judicious and equally good treatment.

Deep and Shallow Planting.—C. L. Shepherd, of Illinois, planted his corn-field shallow, or about an inch deep, except eight rows through the middle, which was planted two or three inches deep. The shallow corn came up first, and kept the lead during the whole season. The difference was discernable as far as the corn could be seen.

Parsnips for Hogs.—Parsnips appear to be nearly the only root, good for swine in an uncooked state. Turn a herd of swine into a field containing field beets, ruta bagas, carrots, and parsnips, and the question will very soon be settled which they like best and which consequently is best for them, the parsnips being wholly devoured before the others are touched.

Chestnuts have been planted near Chicago, according to the Prairie Farmer, and grown from seed in eight years, from 15 to 20 feet high, and already bearing considerable crops.

Good Rule.—The Editor of the *Prairie Farmer*, says he was taught when a boy to refrain from grumbling at two things. The one, is that which he cannot help—and the other, that which he can help.

Salt for Cattle.—A correspondent of the Louisville Journal thinks salt of little use for cattle. He has conversed with stock raisers, and none have furnished him proof that it is of value. He salted a part of his stock regularly once a week, and withheld it for months from another portion, and was unable to discover any difference.

Improvement.—The editor of the Genesee Farmer says he has seen a girl in a cotton mill, tend six power looms. weaving 1260 yards in a week, for which she was paid *five dollars*. In India, where labor-saving machinery is not introduced, a woman must labor 20 weeks to produce an equal amount of goods, and will receive 4 cents a day, or 24 a week, for her services.

Inconsistency.—Dr. Lee asks the following very pointed question, which contains matter for a great deal of reflection for those who will reflect at all.—"When will the cultivators of American soil instruct their representatives in Congress to vote one dollar to teach the arts of peace and the science of agriculture to the young men of the republic, where they now vote *thousands* to instruct them in the art of shedding human blood by violence, or the science of war."

Elder Bushes.—The *Ohio Cultivator* says that the best way to exterminate elder bushes and briars, is to mow them closely to the ground two or three times during the summer; the roots will mostly die after the second year's practice of this remedy." Nurserymen who have occasion to cut down near the ground, stocks which are grafted, or have been budded, have noticed that when the buds or grafts fail after the sprouts have been rubbed off, that the stocks usually dwindle, and frequently die. Cherry trees (which do not sprout readily,) are easily killed in this way; peaches, with more difficulty. No doubt a similar treatment would destroy bushes and briars on the farm.

Cheating the Worms.—S. Williams says that a farmer in Seneca county, N. Y. finding the worms destroying his newly planted crop of corn, planted again between the rows. The worms confined themselves to the first hills, and he harvested a heavy, full and even crop.

Answers to Correspondents.

Peat Ashes.—In reply to our correspondent at Smithfield, Va., in regard to the effects of peat or turf ashes, we observe, that such ashes generally prove useful for most crops. The peat is preferred by some in a charred state—or not entirely burnt to ashes. A writer in the Scottish Quarterly Journal of Agriculture, describes the effect of a mixture of charred peat and peat ashes. A fire was first kindled, and the peat piled around. The fire was kept in a smothered state in order to char the peat, but it sometimes broke out for a while, and made ashes. When the burning was stopped, the mass was about half charred peat and half ashes. The mixture was used as a dressing for ruta baga, at the rate of 200 bushels per acre, put into the drills. It was tried against good stable manure, that would cut like mould with the spade, which was applied at the rate of twenty tons to the acre, and put into the drills like the peat and ashes. Both lots were treated alike. The peaty mixture produced *forty* tons, and the stable manure *thirty* tons, per acre.

The peat and ashes, and the stable manure were also tried for peas, in a manner similar to that described as for turneps, and the rows where the peaty mixture was used, yielded as much as those treated with manure.

Mr. Crispell's Farming.—"A Subscriber," Frederick, Md. The statement to which you refer was an extract from Mr. Crispell's account of his farm products, as given in the Transactions of the New-York State Ag. Society. The quantity of ground occupied by each crop, we do not find mentioned, but the following is given as the product per acre: viz., corn 70 bushels; oats, 71½; rye, 27; wheat, 12; potatoes, 120; hay, 2½ tons. We will endeavor to obtain from Mr. C. the information desired, in regard to the amount of grain and provender consumed on the farm by stock.

Cistern.—H. S., Middlebury, Vt. The plan you propose, of drawing off the sediment, or impure water, from the bottom of the cistern, by means of a pipe and faucett, is new to us, but it looks as if it might answer the purpose. At any rate it will not cost much to try it—the experiment will be useful, from having ascertained *a fact*.

Spaying Cows.—J. R., Utica, N. Y. We have no practical knowledge in regard to this matter. It is quite common in England and in some parts of this country, to spay *heifers* in order to hasten their fattening. We have heard of a few instances in which the operation has been performed on milch cows. The object in this case is to have them continue in milk, indefinitely, as to time. If any one can furnish any information on the subject, either as to the mode of performing the operation, or its particular advantage, in regard to *cows*, we should be glad to receive it.

Trench Plow.—W. H., Trumansburg, N. Y. We do not know where this implement can be had. Since subsoil plows were introduced, trench plows have mostly gone out of use. They were usually made very strong, and without a mould board. Any plow that is strong and large may be made to answer. the purpose of a trench plow by running it deep enough.

Mares for Breeding.—A late English essay on the breeding and management of farm-horses, recommends that mares for breeding should be well-shaped in their different parts; gentle, but spirited; have a large, well-formed carcase; good middle; strong, sinewy limbs; not too high, (say 15½ hands;) broad, well-formed chest, which is of the greatest importance; neck not too long, but well set on; ears erect; free from natural blemishes of any kind; one color is to be preferred, with good action in all paces; head will elevated, which generally indicates spirit; and not too much hair on the legs. The proper age for breeding is neither too young nor too old—(say from five to fifteen,) which will impart vigor to the offspring.

Use of Roses.—A correspondent of a western paper, asks whether mankind would be most benefitted by an acre of roses or an acre of potatoes?

To which the editor replies by asking another question,—which is the most useful, the plow, or the razor?

Prices of Agricultural Products.

New-York, December 14, 1848.

FLOUR—Genesee, per bbl., $5 50*a*$5 62½—Fancy brands $5.75 *a*$6.25.

GRAIN—Wheat, Genesee, per bush. $1.20—Corn 58*a*62c—Rye 62 c.—Barley, 64*a*65c.—Oats, 32*a*36c

BUTTER—Best, per lb, 19*a*21c.—Western dairy, 15*a*18c.

CHEESE—per lb, 6½*a*7½c.

BEEF—Mess, per bbl, $9 75 *a* $11—Prime, $5.75*a*$6.

PORK—Mess, per bbl., $12 50*a*$12 62—Prime, $9 37½—Dressed Hogs, per lb., 5¼*a*5¾cts.

LARD—per lb, 7½ c

HAMS—Smoked, per lb, 6½*a*9c.

HEMP—American dew-rotted, per ton, $155*a*$160.

TOBACCO—per lb., Kentucky, 3¼*a*6c.

COTTON—Upland and Florida, per lb., 5¼*a*6¾—New Orleans and Alabama, 5¾*a*7¼c.

WOOL—Prime or Saxon fleeces, washed, per lb.,...... 35*a*41c.
American full-blood fleeces,.................. 31*a*33
" half-blood,.......................... 26*a*27
" one-fourth blood and common,........ 23*a*25

☞ The news by the last steamer had the effect to check operations in flour and corn The demand for flour is chiefly for the Eastern trade, for which there is moderate inquiry.

Annual Meeting N. Y. S. Ag. Society.

THE Annual Meeting of the N. Y. S. A. Society, will be held at Albany on the 3d Wednesday, (17th) of January, 1849.

Premiums will be awarded on Grain and Root crops, Butter, Cheese, Fruits, &c. Statements should be furnished the Secretary early in January It is desired that there should be a full representation from the county Societies, as well as of the friends of Agriculture generally.

A *Pomological Exhibition* will be held at the rooms of the Society, and growers of fruit are respectfully requested to forward specimens to the Secretary, as early, if practicable, as the 15th of January.

B P. JOHNSON,
Secretary.

Nov 1, 1848—2t.

Mobile Seed Store.

Agricultural and Horticultural Manufacturers' Agents, for the sale of Plows, Straw Cutters, Corn Shellers, Harrows, Cultivators, Seed Planters, Water Rams, &c., &c.

THE undersigned have been for many years devoted to the advancement of Agricultural, Horticultural, and other scientific pursuits, for which a taste is advancing in this State rapidly, and beyond any other period of its existence; and aware of the want of an Agent located in Mobile, in whose judgment in such affairs the citizens of this and the adjoining State and the proprietors can have confidence, and who would take a direct and personal interest in furthering the introduction of approved *Agricultural* and *Horticultural* implements, tools and machinery, we are induced to open an Agency in this city, devoted to these branches alone. From our knowledge of, and acquaintance with the *Planters of Alabama* and *Mississippi*, we are enabled to offer greater inducements and facilities to Patentees and inventors for the sale of their articles, than can be obtained elsewhere. We will open an exclusive

AGRICULTURAL AGENCY WAREHOUSE IN MOBILE,
SUITED TO THE SOUTHERN PLANTER.

Inventors and Patentees are invited to a correspondence (post paid,) relating to Plows, Harrows, Rollers, Cultivators, Horse Powers, Grain and Rice Threshers, Hulling Machines, Fanning Mills, Cotton Gins, and all other articles useful to Planters and Agriculturists.

We will act as Agents for responsible Nurserymen and Horticulturists, on reasonable terms, and will give prompt attention to the receiving and forwarding goods to the interior of the State free of charge.

We will make prompt returns of all business confided to us.

☞ Agricultural Works received on commission.

Mobile, Sept. 1848. S. B. NORTH & CO.

Refer to:—Hon. John Gayle,, Member of Congress; Messrs. Stewart & Eaton, Esqs.; Campbell & Chandler, Esqs; J. G. Lyon, Esq., U. S. Marshal; Messrs. LeBaron & Son; J. C. Hodges, Esq.; Collier H. Minge, Esq.; Messrs. L. Merchant & Co.; J. H. Rivers & Co.; Robert Desha & Co.; David Stodder, Esq.; Luther Tucker, Esq., publisher "Cultivator" and "Horticulturist," Albany; A. B. Allen, Esq., Editor "American Agriculturist," New-York; Wm H. Starr, Esq., Editor "Farmer and Mechanic," New York.

Nov. 1.—3teom.

American Institute

GOLD MEDAL

New-York Agricultural Warehouse,

BY A. B. ALLEN & CO.

Nos. 189 & 191 *Water Street, New York.*

THE *Implements* kept, embrace upwards of FIFTY different kinds of Plows, a great variety of Harrows, Cultivators, Rollers, Seed Sowers, Horse Powers, Grain Cradles, Threshing and Fanning Machines, Mills, Hay Cutters, Corn Shellers, Shovels, Spades, Hoes, Scythes, Rakes, Wagons, Wheels, Carts, Wheelbarrows, Pumps, Rice Threshers and Hullers, Road Scrapers, Axes, Chains, &c., &c. These implements are mostly made up from NEW and HIGHLY IMPROVED patterns, and are warranted to be of the best materials, and put together in the strongest manner, and of a superior finish.

Horticultural Tools—A complete assortment.

Castings, Skeleton Plows, Harrow Teeth, and Iron work of all kinds done to order in the cheapest and best manner.

Steam Engines, Sugar Boilers, Sugar Mills, Saw Mills, Kettles, Cauldrons, &c., for Plantations.

Wire Cloth and Sieves—Different kinds and sizes kept constantly on hand.

Seeds for the Field and Garden—Such as Improved Winter and Spring Wheat, Rye, Barley, Oats, Corn, Beans, Peas, Turnip, Cabbage, Beet, Carrot, Parsnip, Clover, and Grass Seeds, improved varieties of Potatoes, &c , &c. These are warranted fresh and superior of their kind.

Fertilizers—Peruvian and African Guano, Lime, Plaster of Paris, Bone Dust, &c., &c.

Fruit and Ornamental Trees and Shrubs—Orders taken for these, and executed from a choice of the best Nurseries, Gardens, and Conservatories in the United States.

Horses Cattle, Sheep, and Swine—Orders received for stock of all kinds, to be executed to the best advantage, and shipped in the most careful manner.

Agricultural Books—A general and varied assortment of these for sale.

Produce on Consignment—All kinds of Agricultural Produce will be received for sale on consignment.

A Catalogue of the above Implements, Seeds, &c., of 100 pages, handsomely illustrated with plates, will be forwarded by mail, when requested, post paid.

Subscriptions to the AMERICAN AGRICULTURIST received. Price $1 per year, for 12 numbers, of 32 pages each, royal octavo, numerously illustrated and descriptive of the latest improvements on all subjects connected with agriculture. Seven volumes now printed, and handsomely bound, at $1.25 each. Jan. 1, 1849—1t

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THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of " Fruits and Fruit Trees of America," " Landscape Gardening," " Cottage Residences," &c., &c.

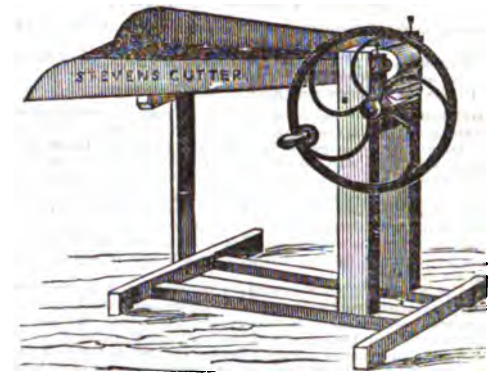
THIS work is published by the proprietor of "The Cultivator," at his office in Albany, to whom all orders should be sent. Two volumes are completed, and the third is now in course of publication. The numbers are issued promptly on the first of the month, each containing 48 pages, and embellished with an engraved frontispiece, and illustrated with numerous engravings of Rural Cottages and Villas, Farm-Houses, Gates, Lodges, Ice-Houses, Vineries, Fruits, Flowering Shrubs and Plants, &c., &c.

TERMS.—Three Dollars per year—Two copies for Five Dollars.

☞ Subscribers may commence with the volume in July, or with the January number. The back Vols. and back Nos. can be furnished.

Agents for " THE CULTIVATOR," will do us a favor by acting also as Agents for " THE HORTICULTURIST," a work designed to promote rural taste and rural art, not only in the orchard and the garden, but in all that gives character and pleasure to a country residence. LUTHER TUCKER.

Albany, January, 1849.



Stevens' Spiral Hay and Straw Cutters.

THE subscriber wishes to call the attention of the public to the following extract from the report upon Hay cutters, of the committee on New Inventions, Machinery, Optical and Philosophical Apparatus, Edge Tools, &c. &c. of the Worcester County Mechanics' Association, at their first exhibition at Worcester, Mass., Sept. 26th, 27th, 28th, 29th, 30th, 1848. This committee was composed of five residents of Worcester county, each and every one being *practical mechanics*, inventors and manufacturers of machinery of the highest character, and known as such throughout the country—and all personally acquainted with the several makers of Cylinder Hay Cutters, as also the several kinds of machines made by them.

They say ☞ " That all articles reported upon by them have undergone full scrutiny, and in every case where practicable, have subjected the claims of merit to severe tests." ☜

" Instructions having been received by the committee, authorising them to act upon any subject involving questions of mechanical merit—such action not to interfere with the awards of other committees." Upon an application being made to them for a mechanical analysis of the action of spiral and straight lines as cutting edges on the surfaces of cylinders, the " committee deemed it a proper subject for their action,"—and in their report they say :—

" A true radial spiral, of whatever pitch or angle, has its plane at all times perpendicular to the axis around which it winds; and at all points where it comes in contact with a cylindrical surface of whatever diameter, it will point directly to, and the pressure will be in perpendicular lines to the cylinder's axis. If then any object passes between the points of contact, it will be severed by direct pressure—and such is the action of spiral blades or knives now under consideration.

" When straight lines are carried diagonally across the surface of a cylinder in the form of a cutting edge, (or any other) the plane of the edge can at no time or place form a radial or perpendicular line with the axis; and consequently the pressure at the points of contact is not in a line with the centre of the axis and plane of the edge, but either in advance or rear of both cylinders; and such is the arrangement of the cylinder, with straight knives or blades now under consideration."

"First. The strain upon the edge of the knife is oblique to its rotating action—the most dangerous that it can possibly sustain—being precisely that of a pair of shears with a loose joint."

" Second. A loss of power; for whatever angle the plane of the cutting edge makes with the perpendicular of the cylinder's axis, the measurement of the base of such angle must be deducted from the leverage working the cylinders."

"We therefore *unanimously* consider that the *Radial Spiral* knives require less power and are *less subject to breakage*, and also, much *less difficult to keep in repair* than the straight diagonal knives, which last are, in the opinion of the committee, at ☞ *Variance with all true mechanical economy*." ☜

STEVENS' SPIRAL HAY CUTTER being constructed precisely upon the above principles, and at the same time the most simple of all spiral cutters in use, and as simple as any kind with straight diagonal knives—and having a *newly invented and patented substance superior to dry hide* for the roller, upon which the knives act, it is in all respects as good, if not the best machine, for the purpose, in use—and at the same time, the prices of machines of equal size, average considerably lower than any other kind, with either spiral or straight knives.

They are kept constantly on hand, at wholesale and retail, at manufacturer's prices—and all warranted—at the Albany Agricultural Warehouse, by H. L. EMERY.

N. B. If reports of committees are to be considered, and the public to be guided thereby, it is of the utmost importance that proper persons are selected as judges. Such as have both practical talent, and time to bestow in making their examinations; and at the same time such men as are known and have the confidence of the public. But such is the hurry, bustle, little time appropriated, and most frequently the poor selection of judges, that the reports at our State and County Fairs, exert comparatively a small influence for improvement, particularly on agricultural machinery, to what is in their power, under a more practical and efficient organization of their committees. Jan. 1—1t.

School of Applied Chemistry,

Attached to the "Department of Philosophy and the Arts," in Yale College.

B. Silliman, Jr., Professor of Chemistry and the kindred Sciences applied to the Arts.

J. P. Norton, Professor of Agricultural Chemistry.

THE Instructors in this department have opened a commodious laboratory on the College grounds, where they are now prepared to receive pupils in special and general chemistry. The system pursued with those who design to become chemists or to study the science extensively, is thorough and complete. Such studies always commence with an extended course of qualitative examination of unknown substances—and in due time pass through a series of varied quantitative determinations. To those who wish to follow special investigations connected either with the arts, agriculture or pure science, every facility will be afforded, both in organic and inorganic analysis.

Prof. B. Silliman, Jr., will instruct particularly in general elementary and analytical Chemistry, Mineralogy and Metallurgy, with special reference to their application to the useful arts. He will also give a course of Lectures on Mineralogy and Metallurgy, continued through the summer term. During the fall and earlier part of the winter, he will also carry a class through a course of elementary Chemistry, in elucidation of the regular course on this subject in the Academical department.

The instruction in the professorship of Agricultural Chemistry is intended to unite, as much as possible, practical views with theory; to give the untaught farmer an opportunity to become acquainted with so much of science as shall enable him to reason upon his daily pursuits, and to understand the great principles upon which good cultivation must depend, presented in so plain a form as to be within the comprehension of all. Few chemical terms will be employed in the lectures, and those only of the simple explanations; they will thus be understood by those who have never devoted any attention to the subject. A regular course of lectures will be delivered in the winter of each year, commencing in January and continuing about two months, there being four lectures in each week. The subjects of the course will be—the composition and nature of the soil, the plant, and the animal—theories of rotation of crops, and of feeding—modes of draining—the different kinds of manures—their value and how beneficial, the improvement of waste lands, &c., &c. Text-books will be indicated for study during leisure hours.

In connection with the lectures will be a short course of elementary Chemistry, for such as wish to study somewhat more of Chemistry than is given in the course, and to qualify themselves for making ordinary testings and qualitative examinations of soils, manures, &c; this course will occupy two hours of five days in each week during two months.

The fee for the Lectures on Agricultural Chemistry will be $10. That for the Elementary Chemical Course, including apparatus and re-agents, will be $25.

Students in Analytical Chemistry are allowed to work in the laboratory during the whole day; glass will be furnished (with charges for breakage,) also the ordinary re-agents and balances for the use of those who are so far advanced as to require them. There will be frequent recitations, and the students will receive the constant attention of one or both of the professors. The fee for this class will be $20 per mouth.

The vacations will correspond with those in the Academical departments, viz:—six weeks from the third Wednesday of August; two weeks from the first Wednesday in January; and four weeks from the third Wednesday in April of each year. Sessions begin with the close of each vacation, and are in length respectively, 14—14 and 12 weeks.

Students in this school will enjoy all the advantages to be derived from the extended means of the institution in Libraries, Instruments and Collections. The Mineralogical and Geological collection is widely known as one of the best in the country, and there are smaller collections in the possession of the Professors. Those who desire it can have access to the Lectures on Chemistry, Mineralogy and Geology, by Prof. B. Silliman, Senior, and to the lectures on Natural Philosophy, by Prof. D. Olmstead.

Instruction is also accessible in higher Mathematics, in Engineering and the use of instruments, in Philology, History, Oriental Languages, and Belles Lettres.

The department of Philosophy and the Arts in Yale College, of which the School of Applied Chemistry is a part, has been organized with a view to meet the wants of those who desire to follow the studies embraced under it further than they are pursued in a collegiate course. Those who desire further information on this subject, are referred to the annual catalogue of the institution for 1847, '48.

A college education is not however required of those who become students under this department.

The Professors are always accessible to those who wish to consult them on matters relating to their several departments; and will undertake such analyses as may be entrusted to them. Letters of inquiry will be promptly attended to.

Analytical Laboratory, Yale College, New-Haven, Jan. 1, 1849.—1t.

South Down Sheep.

THE subscriber offers for sale several very superior South down Rams and Ewes, (from lambs to 4 years old,) some of which are imported animals.

Great care has been taken, and no expense spared, to raise up this stock to a high standard He has lately added to his former stock, several fine animals, many of which were selected personally by their former owner, from some of the most noted flocks in England. Applications may be made either personally or by letter, addressed to [Oct. 4t] J McD. McINTYRE, Albany.

To Nurserymen, Orchardists, and Planters.

THE subscriber offers for sale at his Nurseries, Plymouth. Mass., Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple. (Paradise) stocks, suitable for budding next August, or for spring grafting Also, the following ornamental tree stocks, from two to three feet high, and stout, viz: Mountain Ash, Oak, Hawthorn, Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech, Ash, Norway Maple, Sweet Brier, Larch, Scotch fir, (2 ft) Silver fir, (1ft.) Spruce fir, (1ft) Norway fir, (1ft.) Arbor Vitæ, (15 in.)

Also, 20 of the finest sorts of PEARS, standard and dwarfs.

Priced lists sent to post paid applicants.

Oct. 1—5t B. M. WATSON.

Large Stoves.

THE subscribers are making the largest and best stoves in market for Dairymen, Planters, and Hotel keepers—to which the attention is invited. JAGGER, TREADWELL & PERRY,
Eagle Foundry, No. 110 Beaver st., Albany.

Oct. 1, 1848—4 t.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample. T. C. PETERS & BRO.

Buffalo, Dec 1—6t.

Grant's Patent Fan-Mills.

I. T. GRANT & CO., Junction, Rensselaer county, N. Y., continue to manufacture these celebrated mills. They have been awarded five first premiums at the New-York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the New-York State Ag. Society for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our agents are H L. Emery, Albany; G S. & F. A. Willis, Pittsfield, Mass; Parsons & Dickinson, Springfield, Mass.; John Mayher & Co, 195 Front Street, New York; Benj. Myers, Newark, N. J.; S & E. Hasbrook, Stone Ridge, N. Y.; James S. Browne, Newburgh, N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S. & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md; Fitzhugh Coyle, Washington, D. C; Denison & Webster, Savannah, Geo. Address I T. GRANT & Co., Junction, P. O., Rensselaer county, N. Y., by whom all orders will receive prompt attention Sept. 1.—6t.

John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

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Of all kinds, for sale at the office of The Cultivator.

FARMERS, READ THIS!

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SPLENDID WOOD ENGRAVINGS EACH MONTH!!

768 PAGES IN THE VOLUME!!!

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AMERICAN PORTRAITS,
AMERICAN TALES,
AMERICAN SKETCHES.

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DARLEY

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POEMS,
ESSAYS,
REVIEWS,
SKETCHES,
TRANSLATIONS,
TOPICS OF THE MONTH,

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As a Family Magazine, the Editor is confident that no rivalry can affect, or opposition lessen its value and worth, and he offers it to the world as, in tone, character, literary merit and illustrative beauty,

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OF THE NINETEENTH CENTURY!!!!

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See what the Press says of Holden:

* * "The Editor's table is very rich and amusing—in some respects equal to that of the Knickerbocker."—*N Y. Evangelist*

☞ HOLDEN'S DOLLAR MAGAZINE for September is an excellent number. The literary contents are varied and interesting; the sketches of living American Poets and Divines cannot fail of giving the work a very popular character. The Editor's table is lively and piquant, and the book notices copious and candid. We understand the circulation of this magazine is rapidly increasing.

Horace Greeley, of the N. Y. Tribune.

HOLDEN'S DOLLAR MAGAZINE.—The September number of this work has been received, and to simply say that it is a valuable publication, would not be doing justice to its merits. It is the best of Magazines, and must soon assume its place at the head of the literary press—*Democrat, Bloomsbury, N. Y.*

HOLDEN'S DOLLAR MAGAZINE.—The August No of this sterling journal is now upon our table. In glancing over its contents we are forcibly struck at the superior arrangement of everything appertaining to Literature and Art. The articles are all of a high order, far surpassing anything that appears in "Graham's," or "Godey's Lady's Book." The typography of the number before us, is most excellent, vieing in whiteness of paper and clearness and distinctness of type, with any similar work published in the United States—*Republican, Jackson, Tenn.*

HOLDEN'S DOLLAR MAGAZINE is the most interesting production of popular literature that we know. The price, as its name implies, is but one dollar a year, and we recommend everybody to subscribe for it—*Advertiser, Lowell, Mass.*

"We believe there is no other periodical published in America that contains so much choice reading matter, and such excellent engravings, for so little money."—*Star, Houston, Texas.*

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The object of the Editor has been to give a *Three Dollar Magazine for one third price*, and a glance at Holden's will show the result. Now, he only asks the support of the community, and in return will give improvements as they are demanded.

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1 copy,	one year,	$1 00
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P. S. Editors copying the above prospectus and this notice, and noticing the Magazine editorially, will be entitled to the second volume of Holden's Magazine handsomely bound in muslin and gilt edged, and in addition a splendid full length Engraving, on tinted paper, of Horace Greeley, Editor of the New York Tribune, drawn from life by Wallin, and engraved by Richardson. The book will be mailed to such papers about the 15th of January, when it will be ready, on the reception of a paper containing the advertisement and notice marked Editors copying this and *noticing monthly*, will also receive the Magazine each month for the coming year.

To the Families of American Farmers.

FARMERS! if you wish a good, cheap, elegant and useful Magazine, one which you can admit into your families as a stricly moral work, one which every female in the land can read without fear of meeting anything to cause the blush upon the cheek; if you wish to introduce into the family circle a work which is not made up entirely of Paris Fashion Plates, and Fancy Portraits and love-stories, but rather a mixture of the useful with the agreeable, the instructive with the pleasant, then throw aside the prospectuses of three dollar magazines, with nothing to recommend them but their flimsy engravings, many of them reflexes only of second rate English and French pictures, and turn to the real and substantial work advertised above. For one dollar, it gives every month sixty four pages of reading and a number of beautiful wood engravings, and for all charges but one dollar for a year's subscription. Compare the January No. of Holden's with any three dollar magazine in the country, and then see which you pronounce the best. The former (for January) contains. 1st, a splendid Engraving of Thomas Cole's Painting of Genesee Falls, size of a full page—2d, a portrait of Louis Blanc, of Paris, drawn by Count D'Orsay, and engraved for Holden—3d, a portrait of Dr. William Turner, of New-York, the distinguished founder of the American chrono-thermal system of medicine, a splendid engraving—4th, the Athæneum, of Manchester, England, a fine picture—5th, a full length Portrait of Horace Greeley, Editor of the New York Tribune, from a daguerreotype by A. Morand, drawn by the well known Wallin, and engraved in exquisite style by Richardson, of New-York—6th. a Portrait of Rev. Dr. Chester Dewey, of Rochester, N. Y., well known as the Principal of a collegiate school, and Professor in various institutions in the country—7th, illustrated topics of the month, containing an initial letter.

Can any three dollar Magazine surpass the above list of engravings? What is better, Holden's Magazine will contain each month, an equally splendid array of engravings. Among the contributors the present month we need only name Horace Greeley, Park Benjamin, W. H. C. Hosmer, "Harry Franco," Augustine Duganne, William Wallace, C. W. Holden, and others too numerous to mention. Are our contributors even surpassed by any three dollar publication?

Now what we ask of Farmers through the country is this: Let your sons make an effort among your neighbors to form a club; any young man can easily raise a list of four names without any trouble at $1 a year. If he does so he can secure a copy for himself without any expense, and if he gets twenty names, he can not only have five extra copies, but will receive the second volume of the Magazine splendidly bound, according to the offer in the premiums above.

Farmers, is not this proposal worthy your earnest attention? If so, forward your subscriptions to the subscriber (the money in advance and post paid) whenever the list is ready. Be particular and state with what month you wish to commence.

C. W HOLDEN,
109 *Nassau Street, New-York.*

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Premiums for Subscribers to The Cultivator.

TO AGENTS, POSTMASTERS, &C.

AS an inducement to greater activity on the part of those to whom we are already under so many obligations for their annual efforts to procure subscribers to *The Cultivator*, the publisher offers the following Premiums for subscriptions to the volume for 1849:

1. To the one who shall send us the largest number of subscribers to The Cultivator for 1849, with the pay in advance, at the club price of 67 cents each. previous to the 20th of March next. the sum of FIFTY DOLLARS, to be paid in Agricultural and Horticultural Books, and to include a complete set of *The Cultivator* from its commencement to the end of 1847—15 vols. bound, at $18,—and the first and second vols. of THE HORTICULTURIST, bound, at $7.

2. To the one sending us the next largest number. the sum of FORTY DOLLARS, in books, and to include sets of The Cultivator and The Horticulturist, as above.

3. To the one sending us the next largest number, the sum of THIRTY DOLLARS, in books, and to include ten volumes of The Cultivator, bound, at $13, and the first and second vols. of the Horticulturist.

4. For the next largest list, the sum of TWENTY DOLLARS, in books, to include the first four volumes of the new series of The Cultivator, and the 1st and 2d vols. of The Horticulturist.

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6. For the FIVE next largest lists, each the 1st and 2d vols. of The Horticulturist, bound, $7.

7. For the next TEN largest lists, each, a copy of the 2d vol. of The Horticulturist, bound, $3.50.

8. For the TEN next largest lists, each, vols. 5 and 6 of The Cultivator, for 1838 and 1839, the last two edited by Judge Buel, and containing his portrait.

9. For the TEN next largest, each, a copy of Downing's Fruits and Fruit Trees, or any other work to the same amount, $1.50.

10 For the TEN next largest, each, a copy of Thomas' Fruit Culturist—50 cents.

☞ In all cases, the payments must accompany the orders for the papers.

☞ The books, in addition to those named, to make up the several sums offered, may be selected by the person entitled to them.

Patagonian Guano.

A SUPERIOR lot of Patagonian Guano just landing—put up in tight casks, thus preserving all the ammonia—for sale at two cents per lb., at the Agricultural Warehouse of S. C. HILLS & CO., [illegible] Fulton Street, New-York. Oct. 1, 1848.—4t.

THE CULTIVATOR,

DEVOTED TO THE INTERESTS OF

The Farmer, the Gardener, and the Fruit-Grower,

ILLUSTRATED WITH NUMEROUS ENGRAVINGS OF

Houses, Barns, Farm Implements, Domestic Animals, Plants, Fruits, &c., &c.

THE CULTIVATOR enters upon its sixteenth volume, (the 6th of the "new series,") on the 1st of Jan., 1849. For a period of fifteen years, it has enjoyed a circulation, and exerted an influence, not exceeded it is believed, by any other journal in the country. That its interest and usefulness have been sustained from year to year. we have the most abundant evidence in its large sales, notwithstanding the multiplicity of agricultural journals which have come into existence within the past few years. It will be our aim to render it for the future. not only worthy the support of our rural population, but absolutely necessary to all who would keep themselves well informed as to the progress of agricultural improvement, both at home and abroad. Keeping constantly in view the great object for which THE CULTIVATOR was established,—"To IMPROVE THE SOIL AND THE MIND,"—no effort will be spared to fill its pages with such matter as is best adapted to call into action the mental and physical energies of its readers,—to awaken inquiry as to the best and most profitable methods of farming, and to incite to efforts to carry them into effect.

Particular attention will be paid to RURAL ARCHITECTURE, and numerous DESIGNS of FARM BUILDINGS. GATES, FENCES, and ORNAMENTAL STRUCTURES, will be given—to the department allotted to "THE GARDEN AND THE ORCHARD," which will be conducted by JOHN J. THOMAS, well known as the author of the "Fruit Culturist," and a practical Horticulturist of great skill—to "DOMESTIC AND RURAL ECONOMY," and to the "DISEASES OF ANIMALS," a subject of increasing interest to farmers.

TERMS —For single copy, $1—for seven copies, $5—for fifteen copies, $10, and for any larger number at the same rate. All payments to be made in advance. All subscriptions to commence with the volume, and none received for less than a year.

☞ Postmasters and others interested in Agricultural improvement in all parts of the Union, are respectfully invited to act as Agents for The Cultivator, and to send on clubs of subscribers for the vol. for 1849. Specimen Nos. and Prospectuses will be furnished to all post-paid applicants. LUTHER TUCKER.

Albany, Dec. 1848.

Maryland Farms For Sale.

THE Subscriber having established an Agency for the sale of REAL ESTATE in Baltimore and Harford counties, Maryland, offers for sale, among many others, the following improved farms, all of which are in the immediate vicinity of turnpikes and lime:

117 acres, thirteen miles from Baltimore.
150 " adjoining the above.
100 " fourteen miles from Baltimore.
105 " nine miles from Baltimore.
160 " fifteen miles from Baltimore.
162 " twelve miles from Baltimore.
160 " seven miles from Baltimore.
108 " eighteen miles from Baltimore.
150 " nineteen miles from Baltimore.
108 " eighteen miles from Baltimore.

Also an old Tobacco Farm of *great natural fertility*, eighteen miles from Baltimore, and two from limestone, will be sold in lots to suit purchasers. at from ten to twelve dollars per acre, one third cash, and the balance in six years.

The prices of the improved farms range from fifteen to thirty dollars, one third cash, balance in from three to five years. The climate is very healthy, the water good and very plentiful, and the timber (principally chestnut,) abundant.

All communications, (post paid) will receive immediate attention. Persons wishing to view these lands, will, on application to STREET'S BULL'S HEAD TAVERN, North Front Street, Baltimore, be forwarded to my residence, eighteen miles from the city.

W. B. HAMILTON,
Jan 1 —1m* Long Green, Md.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

☞ The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:

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BOSTON—J. BRECK & Co., 52 North Market-st., and E. WIGHT, 7 Congress-st
PHILADELPHIA—G. B. ZIEBER.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, FEBRUARY, 1849. VOL. VI.—No. 2.

Climate and Products of Morocco.

Letter from the U. S. Consul.

"*Land of the Moors*," *Tangier*, *Nov.* 9, 1848.

FRIEND TUCKER—When, three years ago, I wrote my last communication for your excellent Cultivator, from my little Rural Gothic Cottage at Elmwood, on the banks of the Genesee, at Rochester, I little thought that my *next* would be addressed to you from an antiquated Moorish mansion, on the banks of the Straits of Gibraltar, in such a strange, wild, *unique* country as is this "Land of the Moors." And much less did I expect, while cultivating my ruta bagas and rearing my Short Horns and Herefords, in the valley of the Genesee, ever to be engaged in cultivating the Orange, the Fig, the Olive and the Pomegranate, and training my fleet barb, or Arabian charger, on the plains of Africa. Yet all these strange and unforeseen transitions have taken place in three short years, besides a great variety of equally incongruous incidents which have transpired in the interim. But you know that a love of change, and a propensity for adventure and experiment, are characteristics of the people of Yankeedom; and he must be sadly deficient in the attributes pertaining to a genuine son of Yankee-land, who has not, as occasion may offer, the ingenuity and tact to turn his hand to any employment that may suit his fancy or convenience—whether it be that of an amateur cultivator of nature's productions, either in the frigid or torrid zones, in the temperate or tropical climes—whether it be in wielding a pruning knife or an editorial pen—plowing the land or plowing the sea—whether in cutting the Gordion knot of political tacticians, or the knotty limbs of an unsound sapling—or whether in treading the thorny paths of political strife, or the more dignified and pleasing walks of diplomatic life. This versality of temper and character, which so peculiarly characterises the American people, seems strange and unaccountable to Europeans, although little is thought of it among ourselves.

Before leaving New-York, I promised to comply with your request, to give you some account of the climate, soil, productions, modes of cultivation, &c., in the Empire of Morocco. But I have been so short a time in this country, that I have not yet had an opportunity of observing *personally*, all the different operations of these strange people; and as they all speak in unknown tongues, (at least to me,) but little idea can be obtained by their descriptions, and I fear, therefore, that I shall not at this time be able to afford much either to instruct or interest your readers.

Tangier is in latitude 35° 48. I arrived here on the 14th of July. Previous to leaving my country, my friends thought it would be imprudent in me to reach this hot, scorching climate, in the height of its midsummer heat. But you may be surprised, as I have been, to learn that the heat of summer is not near as intense here as in the United States—even in the most northwardly states of New-York, Vermont, &c. I commenced on the 27th of July, noting the temperature by my thermometer, at 9, 12, 4 and 6 o'clock, and have kept it up nearly every day since; and from that date to the 20th of September, the mercury never rose above 77½, nor fell below 70¾ degrees. It is the most uniform climate that I have ever lived under; we have almost constantly fresh sea breezes, which very much temper the heat of the sun. I happened to notice in a New-York paper, that the thermometer at Washington, on the 28th of July, was at 86°; *here* it was at 73 on the same day. We had *no rains here during the summer season*, nor until the 20th of September, and yet vegetation seemed to thrive, and the land has produced its usual abundance. While the pasture lands in the valleys and on the up-lands, were baked so hard that they cracked open, leaving fissures large enough, in some instances, to admit a donkey's hoof, yet the grounds, vineyards, &c., which were under the process of tillage, did not appear to suffer at all from the drouth.

We had a few days of rain here, the latter part of September and the forepart of October, which gave a very rapid growth to vegetation, making a most remarkable change in the appearance of the whole landscape around. The weather, for the last two or three weeks has been clear and remarkably mild. Since the commencement of this month, the thermometer has ranged at about 65 degrees, and the people are now making their gardens, planting their vegetables—and in many instances, these productions are already up, and looking fresh and green. During a short ride into the country yesterday, I saw the heaths, in some places, literally covered with a most beautiful wild flower, a species of the crocus. The pear, the cherry, plum, orange, &c., are in blossom. It is no unusual thing to see the fig, orange, and other trees, having on them at the *same time*, fresh budding blossoms and ripe fruit. The fresh *fig* is a most delicious fruit, and it comes on in such a continuous succession that we have it in perfection during nearly the whole summer and autumn. It may seem somewhat paradoxical to say that one kind of this fruit is green when ripe, and another black when green—yet such is the fact.

Most of the tropical fruits grow here in perfection—the orange, lemon, lime, plantain, banana, fig, olive, date, &c., and the grapes are delicious. There are great varieties of this excellent fruit—some white, some black, and some of a wine color; the muscatels are very fine, and there is a kind which, from their remarkable length, and delicate, slender tapering form, I should call "the lady's finger," that are of a rich, sweet flavor. We have had ripe grapes here since the middle of July—a single cluster which was sent me by a friend, weighed three pounds. This luxurious fruit may be bought here during most or all of the summer months for *one cent per pound;* fine oranges and figs, [illegible] a doce—or much cheaper by [illegible] for miles around this place, are [illegible] orchards and orange groves—and most of [illegible] and diplomatic colleagues, have fine gardens [illegible] with all these delightful fruits. The Swedish, [illegible] Danish and Spanish gardens are most charming [illegible] resort. There, also, are a great variety of [illegible] and ornamental trees and shrubs; hundreds of [illegible] the different varieties of Geraniums, may be [illegible] bordering the walks; and Oleanders, as large as [illegible] sized cherry trees, put forth most beautiful and fragrant flowers. The linden, the horse chestnut, the catalpa, the palm, the mountain laurel, the larch, and the various firs also adorn the grounds.

You will not be surprised, I presume, that amid such scenes, and under such tempting circumstances, my old horticultural mania should return. I have purchased of a Moor, a little vineyard and garden, containing about an acre of ground, and which, although somewhat run down for want of proper care and attention in cultivating it, has nevertheless, a large variety of grapes and figs, and a small assortment of oranges, pomegranates, &c., with pears, peaches, apricots, cherries, and the like; these latter are much inferior to our fruits of those classes, and I have ordered an assortment of all the best varieties of our American fruits, from our friend Moulson, of Rochester, which I intend to plant in my little domain, as soon as they arrive; together with a small, choice assortment of flower, garden and field seeds, which I have ordered to be sent me with the trees; and I may hereafter advise you as to the success of my experiments.

My little plantation is situated on the slope or terrace of a hill, a few rods outside of the city walls, (enclosed with a hedge of the ever verdant cane, already fifteen to twenty feet high,) and commands fine views of the surrounding orange groves and vineyards, the mountain peaks of Morocco, and the time-renowned "Pillars of Hercules"—as well as of the castle and upper portion of the town, and a delightful water view, overlooking the Bay and the Straits, with the mountains of Andalusia, and the rocky fortress of Gibraltar, peering up in the gray distance; all vessels going in or out of the Straits, pass within range of our view.

Labor here is remarkably cheap. The usual price for gardeners and other laborers, per day, is but two and a-half ounces or doces, which is equal to only 14 *cents*, our money. The usual hours of labor are from sunrise to 4 o'clock P. M., *without stopping for a regular meal*. But if these Moors and Arabs work cheap, they also live cheap; they will work all day on a small bit of bread and a handful of dates, or an onion.

Most kinds of provisions are likewise cheap. Beef is usually about 4 cents per Moorish pound, which is 24 ounces, or a pound and a-half, our weight. Eggs, one doce, or about 5½ cents per dozen; chickens, from three to four doces each. Potatoes are dear, from two to three cents per lb. There is no reason for this, that I know of, excepting that it is too laborious raising them; for I believe that nothing of the rot has yet appeared in the potatoe here. I do not find any of the sweet potato raised here; I intend to try them. Butter is not sold by the pound; it is brought to market in small, earthen jars of various sizes, and sold by the lump. It is churned in goat skins, is as white as lard, and is generally dirty stuff, not fit to eat. We pay two and sixpence, 31¼ cents, per pound for English or Irish butter, of a passable quality, which we obtain through Gibraltar. Why do not some of our Yankee dairymen send over a cargo of their fine butter for this market? They might make a good speculation by it. Barley sells for three to four doces a mood—which weighs 27 lbs.—and wheat from four to six doces,—which is equal to about half a dollar a bushel;—aldora, or Egyptian corn, sells for about the same as barley—and also Indian corn, about the same. There are no oats of consequence raised. Wheat, barley and aldora are sown in January; the first two are harvested in June and July, and the aldora in October. Corn is planted in March, and gathered in September or October.

The *cattle* of this country are of a medium size, quite small boned, and with compact forms, and almost universally of a dull dun color, occasioned, I suppose, by their constant exposure to the hot sun of these latitudes; and they all have immensely long, slim, branching horns; the bulls are no exception in this particular; on the contrary, I should think they excelled the rest of the herd in this respect. The cattle all seem to be of a hardy nature, and keep in good condition on very slight feed; the cows, I believe, are about of a medium rate as milkers. The sheep are of a good size and fine form, but, judging from those that have come under my observation, they appear quite inferior as to wool:—they have very long, heavy fleeces, but they are much too coarse. The goats are the finest, I think, that I ever saw. Their long, fine, glossy fleeces, hang in rich profusion from their sides, resembling the most beautiful silk—their color is generally black—a few are white, and some are black and white.

This is the commencement of the *sheep festival* of the Moors, and thousands of sheep and goats have been thronging the markets for a week past. You could not go through the streets without meeting—here a Moor leading a buck or wether by the horns—there, one with a sheep's hind legs in his hands, trundling him along on his fore feet, after the wheel-barrow fashion—and yonder a wild-looking Arab, with a live sheep across his shoulders and around his neck.

In thinking of the dreadful slaughter to be made among these poor animals, I could not help repeating the words of the poet:

> "The lamb thy riot dooms to bleed to-day
> Had he thy reason would he skip and play?"

But of all the domestic animals of this country, the Arabian *horses*, or barbs, as they are called, are the most noble and beautiful. They are, in fact, renowned the world over, for their noble qualities and superior points. I have had the good fortune to obtain one of these fine, pure blooded stallions. Although but four years old, he stands full sixteen hands high, is of a jet, glossy black color, with a beautiful mane, a long sweeping tail, a finely arched neck, and clean limbs; and his movement is as light and graceful as that of a gazelle. He was procured for me of a Kabyle chief, in one of the interior provinces, through the exertions of a kind friend. Several of my consular colleagues have beautiful specimens of these noble barbs. The Moors and Arabs are strongly attached to their horses, and are very reluctant to part with them; they pet them, caress them, and even kiss them; and it is *said* they treat them with more kindness and fondness than they do their wives; but that must of course, be a scandal! The power of endurance which these horses possess, is truly surprising; they will travel day after day, over sandy plains or rocky mountains, on an amount of feed that would scarcely suffice for a sheep.

Horses are not allowed to be taken from this country without paying an export duty of one hundred dollars each; excepting that, as a matter of courtesy, the Emperor gives to the various Consuls General residing here, the privilege of shipping one occasionally, to their several countries. Mares are not allowed to be taken away at any price, and an export duty of $10 per head has to be paid for shipping bullocks from here.

No such thing as a wagon or wheeled carriage, was ever seen in this country. Horses, camels, mules and donkeys, or asses, are used as beasts of burden; but the beast of all work and all drudgery is the *donkey;* on his back are borne loads of wood, stone, straw, sand, lumber, manure, wild Arabs, live sheep, and in fact, everything portable. A drove of *forty* of these animals marched in defile before my door the other day, all laden with sand, to be used in re-building a portion of the consular house.

On market days (which take place on Thursday and Sunday of every week,) hundreds of these patient animals, and hundreds of camels, may be seen winding their way along the rugged mountain passes, and through the intervening valleys, and pouring from the hill-sides into the market place, (or soco, as it is called,) laden with the strangest looking cargoes and most wild and grotesque looking beings that man ever looked upon. You will see the wild Bedouin Arab from the desert, the ebony negro, the fierce mountaineer, the swarthy Kabyle—many with their huge shoulders and bronzed breasts, and their long brawny arms and legs, entirely naked—some mounted on lumbering camels, some on mules and asses—with the tattered remnants of their garments streaming to the breeze—some dashing onward on foot, driving droves of beasts before them:—and then, as they enter the soco, to see them running furiously through, and mingling with, a crowd of a thousand persons, composed of troops of fine, manly looking Moors of the town, with their white flowing haiks and their snowy-white turbans—and sharp-eyed Jews, with their close black caps, shrugging their shoulders and seeking for a close bargain—and amidst all this, to hear the loud yells, the almost deafening clamor and confusion of tongues, which rend the air—such scenes as these—so strange and so novel, combining the oriental with the grotesque, the savage and the ludicrous, are beyond any thing that the wildest imagination, in its strangest flights of fancy, can well conceive of.

But I am digressing. In speaking of the domestic animals of this country, I omitted to notice *swine*, for the very good reason that here they rank as *wild* animals instead of domestic. You are aware that the creeds of the Jews and Mahomedans interdict the use of pork. Consequently, there is nothing of the swine species to be found in this country, excepting the *wild Boar;* and these are quite abundant. Hunting the wild boar, is rare sport, and very exciting, withal. I have been on one of these wild forays among the mountains, and had two fair shots at a young Boar, and one at an Ichneumon, but my little daughter, who accompanied me to our encampment, says that I was "too humane to kill the poor creatures." I was obliged to accept of her ironical apology, for the want of a better one. Our party, however, killed two huge wild Boars, and I must confess that my "humanity" did not deprive me of the *gratification* of "being in at the death." They had immense tusks, and would weigh, I judged, 200lbs. each, although they were not fat. Their hair was of a dark iron gray color, and quite coarse. The meat of the wild Boar is sometimes very tender and of good flavor.

I have been trying to procure a young wild Boar to send you alive, but have not yet succeeded; for neither the Moors nor Jews dare be seen bringing one of them in—they dare scarcely touch these "unclean beasts," as they regard them. They do occasionally, however, slip a pig under their haik or blanket, and bring them stealthily into town. When I succeed in obtaining one, I will send him to you, if you wish. If they will not beat your neighbor Bement's Berkshires in bearing down the scales, they certainly will in *running*. *Leeches* put up for market, sell here for $14 per 1,000.

Well, I find I have written you a long, miscellaneous letter, without touching upon half the subjects I designed to. As to the *modus operandi* of tilling the soil, sowing and planting, and harvesting the various crops—the qualities of soil, and many other like matters—I shall have to defer a description of them until another time; if, perchance, you and your readers are not sated with a perusal of this lengthy, disjointed letter, which I have been obliged to dash off in great haste, without regard to method or systematic arrangement.

I must, however, before closing, notwithstanding its irrelevance, tell you of a *self-resurrection* which took place here the other day. Some two or three weeks since, while passing across the soco, or market place, I saw a troop of Moorish cavalry winding their way up the crooked road leading from the beach; after them and with another detachment of cavalry in the rear, came about one hundred prisoners, on foot, marching in single file, with a long, heavy chain extending along the whole line, resting on the shoulders of the prisoners, with a smaller lateral chain fastened around the neck of each prisoner, and made fast to the main chain. In this position they were marched from the prison at Tetuan (about thirty miles distant) for the purpose of being secured in the castle at Tangier. On the way, and just before reaching this place, one of the prisoners fell, exhausted with fatigue. On taking him up, they found him lifeless. When they arrived at the soco, it was nearly sunset; the cavalcade halted, and the officers held a consultation as to what should be done with the poor fellow's remains. They finally determined to deposite them in an open "saint's house," which stands near the centre of the market place, until morning, when they would have them interred. The body was taken upon the shoulders of three or four Moors, and, with the legs and arms dangling, as they passed by where I stood, thus conveyed to this temporary dead house, and there left, without a single watcher to guard it from violation. * * * * In the morning, they found that the dead man had *run away!*

Yours, truly, T. H. H.

P. S. It may not be known to the American commercial interest that there has recently been a *radical reduction* in the tariff import duties of this country. The duty used to be 20 per cent—it is now reduced to *ten per cent. ad valorem*—on all articles imported save on iron, which is reduced from $5 to 4 per cwt. Raw cotton to $3 per cwt.; raw silk from $1 to 50 cts. per lb. It is hoped that this favorable change may give a new impulse to our commerce with this country.

To Prevent a Cow from Kicking.—An exchange paper states, that a piece of wood in the shape of the hind leg of the cow, and made to fit the gambrel or hock joint, may be strapped and buckled on the leg so as wholly to prevent her from kicking.

Acres of Land in England.—The total acreage of England, is said to be 32,342,400, which is divided as follows:—

	Statute acres
Amount of arable lands and gardens, ...	10,251,800
Meadows, pastures, and marshes,........	15,379,200
Wastes capable of improvement,........	3,454,000
Incapable of improvement,...............	3,256,400

To exterminate Sorrel.—Sow clover seed very thickly, with a small portion of timothy.

Sale of Short-horns in England.—At the recent sale of Sir Charles Knightly, twelve bulls and bull calves brought the sum of £769, 13s., ($3,853.25.) One thirteen months old, brought 140 guineas, ($700.) Another six months old, 115 guineas, ($575.) At another sale, 16 animals brought an average of £43 ($265) each. At another very large sale, the average obtained was £30, 9s., ($151.25) each.

Suggestions for Farmers.

The Study of Nature Recommended.

Editors Cultivator—Much has been said and written within the last few years on the importance of the study of Natural Science to the farmer; still, we think the subject is so important that there is little danger of too much being said. The study of Natural History has received so little attention in the United States, that very few farmers have a familiar knowledge of Chemistry, Geology, Mineralogy and Botany, not to mention Entomology, which may be said to be in its infancy in this country, a large portion of our insects yet remaining unknown and undescribed. Let the votary of Natural Science travel to collect specimens, and he will often be questioned respecting the use of his specimens. If he gather plants, the general impression will be that they are for medicine. He will rarely meet with any one who knows the utility of a cabinet or a herbarium, almost every body supposing that they are to be converted into money in some way; yet to what practical use many of the specimens can be applied, they cannot imagine.

It is an old saying, that "knowledge is power," and this maxim is most strikingly verified in the pursuit of farming; so much so that individuals, farming in the same neighborhood, with farms of an equal natural fertility, meet with widely different results. The one has large profits on his capital invested, and the other, perhaps sinks money, or with difficulty raises sufficient to defray all expenses and support his family. The one obeys nature and her laws, and the other manages without system and contrary to nature. It may be said that many farmers make money and are highly successful, with little or no knowledge of Natural Science.—Granted; yet it must be admitted that they have derived benefit from the example of others, who were acquainted with natural science, or they have more or less followed the instructions of men who, by experiment and observation, have obtained at least a partial knowledge of the laws of nature. Besides, if we examine closely, we shall find that most of our very ignorant rich farmers, have acquired money by great industry and economy, carrying the latter virtue to so great an extent as to deny themselves and families many of the conveniences and comforts of life. All will admit that a knowledge of Chemistry, Geology and Botany, embracing a knowledge of vegetable physiology, would be of great practical utilty to the farmer. Were he a chemist, he could analyze the soil, and to do this, sufficient for all practical purposes, is within the capacity of all. By analyzing the soil, and knowing in addition the composition of the plant cultivated, the farmer knows what his soil needs, to grow that plant in its greatest perfection; or, in other words, he can feed the plant its proper food, and in suitable quantities. The farmer deals with nature. The greater portion of his life is spent amid the scenes of nature; hence, the more he understands nature, the better will he know how to manage her in her varied changes. The great improvements that have been made in Agriculture during the last few years, are mainly owing to the appplication of science; and as yet we are but in the commencement of the improving era. Then it behooves us as farmers, to study nature, and let the youth of our land, the future farmers of the country, be taught the study of nature. Then, by knowledge joined with experiment, industry and economy, they will scarcely fail to enjoy a competence, besides having a greater opportunity to make new discoveries in agriculture and science, than the professor whose life is spent in the laboratory or academic hall.

Notwithstanding the great assistance science affords in the acquisition of wealth, we think the greatest recommendation to its study, is its power of affording happiness, which, after all, is the chief end and aim of every rational being. Our best and most permanent happiness, is mental, or derived from the mind. All other enjoyments are shared by the brutes, in common with man. Hence it follows, that the highly cultivated mind is capable of greater enjoyment than that which is uncultivated, because the cultivated mind has a greater variety of food to satisfy its desires. We say its capacity for happiness is the greatest; not that, in every instance, the cultivated mind is always the happiest. We think the cultivated mind, versed in Natural Science, is the happiest of all, because the study of nature is more congenial to the mind in its natural state than any other. Most of us recur with pleasure to the period of childhood, when we roamed in the woods and fields, gathering flowers and hunting birds' nests, or chased butterflies and played in the brooks. Then was the time that all nature looked smiling, and then was the time to have instilled in our breasts a love of nature, by instructing us in the first principles of natural science. We have been told that Mr. Barnes, whose name is identified with the conchology of this country, many years ago had charge of a public school in the city of New-York, and was highly successful in managing and improving his boys, besides implanting in their bosoms a strong love of nature, without interfering with their other studies. He encouraged the boys to gather curious stones, pebbles, shells, &c., during times of intermission and vacation, and to bring them to him. He would then name them, and talk about them, returning to each boy his own specimens, and the boys began to form cabinets for themselves. The effect was, it kept the boys out of mischief, besides affording them useful knowledge. Many of the boys of that school preferred gathering specimens in Natural History, to play, and several of them afterwards became distinguished naturalists. But the present system of common school education tends to deaden, instead of strengthen, a love of nature in children. Even in our higher schools and colleges, the study of Natural Science is considered of secondary importance, and there, if taught, it is genenerally done very superficially; however, a brighter day begins to dawn, and its importance is seen and felt by many.

A great proof of the power of the study of Natural History to afford happiness, is its health-giving principle. It leads its votaries to spend much time in the open air, amid the glorious scenes of creation, where their minds are agreeably entertained by the surrounding objects, whose order and beautiful adaptation of means to ends, excite both wonder and admiration. That the state of the mind has a great influence upon the health of the body, is well known to all. Its power to restore to health consumptive and dyspeptic persons, is magical. We know of several distinguished naturalists, who think that they are indebted to their love of nature for their health and life. At one time, the state of our health was such, that our friends supposed we would not live long, and we almost despaired of life. Away from home, in the University at Middletown, Ct., we began the study of mineralogy, and the formation of a cabinet. With congenial spirits, we roamed over the glorious hills of New England, examined her quarries, mines and stone fences, in search of specimens. We had happy times. Our health was restored.

A great recommendation to the study of nature, and one which should induce parents to have their children thus instructed, is that it is a great preventive of vice and dissipation, because the mind of the naturalist is never at loss for employment, for suitable food. Let him be where he may, the great book of nature is ever open, inviting his study and attention, always presenting something new or wonderful. The great order and variety which nature displays, is one great cause of the study of Natural History being so fascinating, since the love of variety is deeply implanted in the human heart. The mind of the student of nature is never at loss for company, for good society. He has no need of resorting to the tavern, the grog shop or gambling house, to pass away the time. Let our farmers' sons be well educated, especially in the different branches of Natural History, then they would not become dissatisfied with their vocation, as it sometimes happens, but they would prefer it to every other. Supposing that a farmer knows the correct name of every plant with its properties, that grows on his farm, the composition of its soil, its minerals and rocks; would not such knowledge add greatly to his happiness? Then he would work understandingly, and his daily walks in the fields would be enlivened by familiar acquaintances. Not a flower, or plant, or pebble, would escape his notice; indeed, there is nothing which tends more than the study of nature, to increase the powers of observation. The naturalist sees beauties unseen by others; tastes pleasures unfelt and unknown to others. "He sees wisdom in the trees, books in the running brooks, sermons in stones, and good in every thing." He does not become tired and disgusted with life, and find fault with the world and the order of Providence; but the more he studies, the more he discovers wisdom, design, and goodness in the arrangement of things, and a unity of design in that arrangement, proclaiming that its author is one and the same, possessing all knowledge and power. It has often been said that a country life is the happiest, and poets have often sung its praises; for this the citizen pants while toiling to amass a fortune, and yet such a one, after having accomplished his wishes, and purchased a situation in the country, is often doomed to disappointment, simply for the reason that such a life is different from his former habits, which have become to him a second nature; besides, he is ignorant of Natural History, and a country life soon loses its charms, and he longs to return to his former busy avocation. Had such a one a knowledge of and taste for nature, how happily could he pass his time amid the varied scenes of a country life. S. B. Buckley. *West Dresden, Yates Co., N. Y., Dec.* 1848.

The Education of Farmers' Daughters.

Eds. Cultivator—Most of the farmers of our country, are the sons of farmers; and most of their wives are the daughters of farmers. This shows the propriety of educating our children with reference to our own occupation. The first and most important step towards the improvement of the great agricultural community, is the improvement of the mind, by a proper early education. Until they as a class, are as well informed as those engaged in other pursuits, they must and will feel a degree of diffidence, a want of confidence in themselves. The most important duty we have to perform, either as parents or citizens, is that of properly educating and bringing up our children. Until the farmers so discharge that duty, as that their descendants rank equal with those engaged in other pursuits, they will be guilty, as they too long have been, of a great dereliction of duty.

I am pleased to see, of late, able articles in our journals, on the subject of giving our sons an agricultural education; but this should be coupled with a good common education, at least. I am proving the want of this in almost every sentence I write.

We should also remember, that the education of our daughters, is of equal importance, and that common justice requires that we give them an equal chance with our sons. It is true, our women do not vote at our elections, or hold political office, or manage the out door concerns of the farm; but it is equally true, that they exercise their full share of influence in all our concerns. They have the moulding, direction and training the minds of our children—the boys to the age of ten or twelve, and the girls to a much greater age; and nature has admirably fitted them for the performance of this important duty. Their early impressions, derived from the mother, are indelibly fixed in their minds, and have great weight in forming their future characters. Most of us, who had a mother living after we became old enough to recollect, can well remember the fine sympathetic feelings she possessed and taught us; and these are among the noblest feelings of the human heart. We can also well recollect the rigid principles of morality taught us by her, and the lasting impressions they made on our minds. If we look about among our acquaintance, we shall see that wherever there is a well educated intelligent mother, there is also an intelligent family of children. And this is a much more important matter, than the rearing of fine, high blooded animals with four legs.

If we will divest ourselves of pride and prejudice, and examine coolly, we shall see that our women have greater influence over us, than we are generally willing to admit.

Nor is the importance of educating our daughters less in a pecuniary than in a moral and intellectual point of view. Much of the success, prosperity and comfort of every farmer, depends upon the management of his indoor concerns, by his wife. There is no occupation in which intelligent women are more useful than that of farming. If we will look about among our acquaintance, we shall see that whereever there is a wife of the right stamp; if the husband possesses ordinary ability and industry, they will be prosperous. If I am right in this, it shows the necessity of properly educating our daughters, *and giving them a proper training in all matters that relate to good housewifery*. Let us fit them to make good farmers' wives, and they will answer for those engaged in other pursuits. We should first attend to the useful and substantial part—*that well done*, if we can afford it, do something by way of the ornamental. But it is feared that some of our farmers pay too little attention to the former, and too much to the latter.

A young lady, with ever so fashionable an education, *if she possessed no knowledge of the kitchen, and the different departments of house-keeping*, however well she might show off in the parlor or drawing-room, would make a farmer a very unsuitable companion; she would not be worth as much as Lot's wife after she became saltified, because he could procure from her salt for his porridge.

The first and most important step, is to make our common schools good. If this is neglected, the great middling class of farmers, and almost all the poorer class of people, will fail in giving their children a proper education. I think select schools should not be encouraged. They are antagonist to the interest of the common school, (being usually no better than the common school *ought* to be,) each one injuring two or three, by the withdrawal of the children and influence of the most wealthy inhabitants of the district, besides their tendency to create aristocratic notions both in the parents and children of the more wealthy, and a degree of inferiority on the part of the parents and children of the less wealthy. Let them associate and be taught together on the principles of equality, which lie at the foundation of our government. Let mind here have fair play against mind, and talent will be brought out without reference to the wealth or poverty of the parents.

We should make our common schools such that our scholars can go from them direct to the academy, to good advantage, or procure a good common education without. When this is done, we shall have an intelligent agricultural community. **FARMER.** *Columbia, November*. 1848.

Means of Advancing the Interest of the Farmer.

EDS. CULTIVATOR—Whatever will destroy the fondness for change, and create a thirst for a scientific knowledge of his business—whatever will gratify such thirst, in the highest degree, at the least possible expense—whatever will give him the most correct knowledge of the effect of his labor, when preparing the soil and putting in his seed—whatever will create in him a true taste for his business, a proper pride and self-respect, which follows a suitable education in all other business and professions—that which will enable him to observe the sublime and beautiful operations of nature, and fit him for converse with her, that he may receive her promises in advance of his toils, with a certainty of a corresponding reward, instead of a sickly hope, stimulated by the flattery of chance, will be found among the best means to advance the interest of the farmer. There is no other pursuit that more requires preparatory knowledge, than that of tilling the ground; any other business may depend upon experience alone, better than that of farming; as the result of experiments with the soil cannot be known oftener than once a year, it requires more than a life-time, perhaps, to establish any one fact, unless directed by a well grounded theory; then they become the most important auxiliaries to science, in extending the bounds of correct knowledge in the most important of all arts.

For the older portion of the farming community, such as could not be expected to attend agricultural schools, Farmers' Associations might be formed in every town, which should support an extensive agricultural library, situated in a central part of the community, where regular meetings might be held, and such subjects discussed, relating to the object of the association, as would be found most pleasant and profitable, avoiding always political and religious controversies. If no public speaker should be present, a free interchange of opinions, in a familiar conversation, would no doubt, be found pleasant and of great utility in combining the experience and knowledge of the whole association—not for the benefit of one—but each and every member present; and if the proceedings should be published, as has frequently been done in similar associations which have already been established, much good will be derived from them by other communities and individuals. The place of meeting would be a kind of Farmer's Exchange, where each would be able to learn the state of the market among themselves, and by each taking an agricultural periodical, they would learn the state of the market elsewhere; which, in addition to other valuable information, would prepare them to meet the most wily speculator, who might wish to buy their produce for less than its fair value, on his own grounds.

But for the rising generation, there should be an agricultural department in all our common schools and academies at least, and perhaps colleges, which, together with such other purely agricultural institutions as may be found necessary, would make our country, within a few years, blossom like the rose, and through the medium of our telegraphs, railroads and steamboats, diffuse a spirit of improvement over the whole habitable globe,

It is plain that the most essential knowledge should be first acquired; therefore, a piece of ground should be attached to every district school, especially in the country, and tilled by the students, under the superintendance of a competent agriculturist. The common objection to this seems to be the strongest argument that can show the necessity of it; the fact that it is almost impossible to prevent the destruction of every thing about the premises of a common school, by the mischief loving and careless part of the attendants, shows the necessity of an early check to that now all pervading and most pernicious propensity to destroy public property, or any other that immediate self-interest does not prompt us to protect. This propensity never can be more successfully corrected, with less pain and expense, than in early youth, nor is it more impracticable than to correct any other habit, which if not restrained early, amounts in the older urchin to an uneasy propensity, resembling that which causes a horse to bite a fence or shade tree, or anything within reach of the bridle which restrains him from running at large. It would be placing our species on a level with the horse, to maintain that this disposition could not be successfully treated, if taken early and properly managed.

In striking out a course to "advance the interest of the Farmer," all narrow-minded policy should be set aside. If it should be thought necessary to endow an extensive state agricultural institution, it could not interfere in the least, with a similar department in our common schools and academies, neither could one do away with the necessity of the other. Instead of the object of one being accomplished by the other, the utility of each should and would be taught and learned in the other; thus would they harmonize, like the high and low notes in a most delightful piece of music, touched by the fingers of nature herself. **DEAN.**

Agriculture of Virginia.

A Ramble in Southwestern Virginia.

EDS. CULTIVATOR—Having just accomplished a tour through Southwestern Virginia, more familiarly and distinctively known in our state, by the soubriquet of "Little Tennessee," it may not be amiss to jot down "currente calamo," some recollections illustrative of that now secluded but interesting region.

A young friend and brother farmer as my companion, mounted on stout steeds, the most eligible means of locomotion in the present condition of "internal improvements" in the proposed route,—we set off on the evening of the day of the Presidential election. Guided by the light of the moon and the stars, we traveled until the rising sun of the 8th Nov. found us beyond the limits of our native county, "Old Augusta." We passed on successively through the counties of Rockbridge, Botetourt, and Roanoke, of which I have neither space or intention to write particularly, and of which there is less necessity, for their flourishing farms, beautiful villages, and stupendous "Natural Bridge," have already often found many and fitter pens to portray them.

The inclemency of the weather halted us for a day at the base of the Alleghany mountains. The following morning found us upon its summit, whence, casting a "lingering look" backwards on the blue mountain boundaries of our valley, we spurred on through the county of Montgomery, and crossing New River, on a handsome wooden bridge, we were in the thriving new county of Pulaski. On either side, we noticed beautiful farms—mostly covered with blue grass; and the "cattle upon a thousand hills," quietly grazing in plenty. Arriving upon the borders of Wythe county, we called upon Col. **RICHARDSON**, by whom we were shown some fine cows and calves of the Matchless and Hampton breeds. (?) These are large and finely formed, commanding an excellent price. They were introduced into the county several years since, by some of its enterprising citizens.

Bidding adieu to the hospitable family of Col. Richardson, we next stopped with Mr. **Chas. C. Tate.** This gentleman owns a beautiful and extensive farm, well adapted to grazing purposes; and nearly the whole of the cleared land, about 800 acres, is well set in various kinds of grasses. The past season he has fattened and sold about 90 head of cattle. Some of his cattle show considerable improvement upon the native stock of the county. One of the steers which he had fattened, we saw butchered at the county seat, and it weighed 1670 lbs. *nett.* His sheep are of a cross of the Bakewell, upon the common stock of the country. Although not so large and heavy fleeced as the improved Cotswold, yet they are handsomely formed, evince great aptitude to fatten, and altogether, reflect credit upon their spirited breeder. His swine are a cross of the Berkshire from Massachusetts, and a large-framed white hog, obtained from near Lynchburg, Va. They have proved to be of perhaps the best breed yet introduced, being well suited to the farmers of that region. We were here shown a kind of grass, new to me, called from the name of the person who introduced it, the "Randall Grass." It is considered by some of the best farmers, a very valuable acquisition; it starts early in the spring, grows luxuriantly, and affords an abundant and nutritious food. It looks somewhat like the "Orchard Grass," but does not appear so coarse, nor does it grow so much in tufts. It is, probably, the English Blue grass. The common Blue grass grows spontaneously, and abounds. Stock fatten more rapidly upon it than any other—a mixture, however, of several species, is generally preferred.

We visited also, the adjoining farm, "Fort Chiswell." After an introduction to its worthy proprietor, at our request we were conducted to a distant part of the farm, and shown a lot of fat cattle. We estimated 20 of the best to weigh over 1800 lbs. gross, each. There were 125 in the lot; a part were of the Short horn, showing high blood and good treatment; the others, with but few exceptions, were crossed with the Matchless and Hampton stock. We also saw a lot of fat hogs; slaughtered—some of them weighed over 400 lbs. *nett;* a lot of 23, averaged 310 lbs., *nett.* We saw many other things to interest us in our ride over this magnificent estate of 4,000 acres. The county seat of Montgomery county was formerly located here. The old county jail is still standing, a miserable looking log hut, forcibly reminding one of the Black-hole in Calcutta—we were reluctantly compelled to decline for that time, a polite invitation to the mansion house, and parted with our attentive friend, under a promise to call upon him at some "more convenient season."

The following morning we left, with much regret, the kind and excellent family of Mr. Tate, who himself insisted on accompanying us a few miles, in order to show us the beautiful estate of **Gurdon Kent**, Esq. Unfortunately, Mr. Kent was absent from home; however, we took the liberty to ride through his farm, and view his fine herd of cattle, which was truly a gratifying sight. This is one of the best farms in the county. The fencing was in good repair, and substantial gates hung at the entrance of all the fields through which we passed. But a small portion of the arable land is in cultivation, grazing cattle being the great business of this country.

Here we parted with our gentlemanly companion, not however until we had gratefully accepted his kind proposal to rejoin us the next day, to make an excursion into Smythe, his native county, and adjoining Wythe. Wending along through two or more farms, we called upon **C. L. Crockett**, Esq., a very intelligent and agreeable gentleman, who gratified us in showing his stock and farm. Here, for the first and only time in this wealthy country, I saw an agricultural paper—the *Southern Planter.* I was afterwards informed that Mr. Crockett had been active in introducing improved breeds of stock, of different species, into that county. He kindly offered to accompany us, when we returned, to several portions of the adjoining counties, which we had not visited, and very much to my regret, an accident to my horse, only prevented our compliance with his polite invitation.

We then started, in company with Mr. Tate, for the Rich Valley in Smythe county. We saw many interesting things by the way, which space will not permit us to mention. We will but allude to the fine stock at the "Seven-mile-ford," a large and well managed farm on the middle fork of the Holston river. Indeed, every thing upon it reflected praise on its worthy and hospitable proprietor, Mr. **Hanson.**

We next visited the salt works in the Rich Valley, where we made the acquaintance of **Thos. L. Preston**, Esq., a devoted friend of agricultural science and agricultural improvement. On the day previous to our arrival, he had delivered, to a large assembly of the citizens of Smythe, at the Court house, an agricultural address, which was spoken of by all as an eloquent appeal, and calculated to do much toward the promotion of the noble cause. Mr. Preston is engaged in manufacturing salt; has two large furnaces in operation, making about 600 bushels per diem. The supply of salt water is thought to be inexhaustible. There are several other furnaces here, in operation, by different individuals. The salt is of a very superior quality, and wants but means of access to market to develope advantages to all concerned. Here too, is a bed of gypsum, of superior quality, extending about 15 miles in length, and several hundred feet in depth. Some of the banks are now being worked, and the gypsum sells at the banks for $3 per ton—while at the distance of only ten miles, the price is *doubled!* If proper facilities of transportation were afforded, it is considered that abundance could be furnished to supply the whole state of Virginia. Here again, the very earth cries out beseechingly, for a way to market. After spending a day with Mr. Preston, who had given us a real Virginia welcome, and who showed us all we could desire to see, we took our departure from his picturesque valley, which, embosomed in mountains, lay asleep in its beauty, like another, and a real "Leclusaval."

But it were too long to tell of all that interested us, even as farmers, totally neglecting the scientific, geological, mineralogical and manufactural interest—and it is high time this lucubration were brought to an end. which has unconsciously extended to something like prolixity. To close rapidly—we rambled still farther up the north fork of the Holston. This region is admirably adapted to grazing fine-wooled sheep, being generally too steep for cattle or cultivation; some gentlemen of this vicinity, having turned their attention to wool growing, I was induced to promise them the excess of my flocks of Spanish Merinos and Cotswolds. Here we saw many fine farms, and made valued acquaintances. Returning homewards, we made a detour to the left of our outward route; passing by quantities of rich land, whose virtues were scarcely even tested, we again reached New River, some ten miles below our former crossing, and directly opposite "Buchanan Bottom," the farm of Major **Kent.** We were sadly disappointed at losing the opportunity of a personal acquaintance with the Major, who was absent. After "presenting our credentials," and exchanging salutations with the family, we rode through the fine farm of 5,000 acres—stopped to look at some superior milch cows, grazing in the field. They were large and well formed, showing fine blood. We took them to be Short horns, and crosses of the Durham and native stock. Other farms I would mention had I space; but with good wishes for our kind acquaintances, we must bid farewell to them and "Little Tennessee." Would that all Virginia could be fully impressed with the importance of this part of the state, and see that it is destined to a celebrity more to be envied than its present political one—that our legislators would come down from the clouds of federal politics, and look more to domestic necessities, and that the vast mines of wealth which now lie hidden away in that remote corner of the state, be left no longer unproductive, like the talent wrapped in a napkin and buried in the earth. And let us hope, that the projected system of internal improvement for this country, be speedily completed, to develope its mineral and agricultural resources, and appreciate its manufacturing power, which is now but dimly shadowed forth in its spirited little rolling mills and nail factory, when almost every mountain stream might work a Lowell, and Virginia, at length, become what is her right and her destiny,—an empire herself, and yet "imperium in imperio." S. F. C. *Walnut Hills, Augusta Co., Va., Dec.* 1848.

Sketches of Farms.

The Farm of W. A. Hayes, Esq.

Editors of the Cultivator—The agricultural readers in New-England are quite generally aware that this gentleman is a most systematic, enlightened and successful cultivator. He has long been a zealous promoter of improvements in farming, and that zeal has been directed by a most thorough knowledge of all its principles. In the month of October last, I had the pleasure of visiting Judge Hayes, at his farm in South Berwick, Me., and found much in his mode of culture that, in my view, is worthy of consideration. Some of the prominent points of his husbandry, I shall now notice, with the hope that the readers of *The Cultivator* may find something useful in the perusal.

Judge Hayes' farm consists of about 160 acres, the most of which he purchased some 30 years ago. He has, in addition, 60 or 70 acres of pasture, a mile or two from home. His land is the oldest settlement in that part of Maine; and some of it has been cropped for a long period of years. The Judge has in his possession the original deed from the Indian chief, to the first white or civilized proprietor, and he gave the deed of the premises to the Judge. The farm extends over a high hill, with low, wet lands on each side, and much of the soil is naturally quite thin. As it came into his possession, it was mostly pasture land, covered with bushes, and other coarse herbage, of little value. The arable land had been hard-run, producing only hay enough for the wintering of 6 or 8 head of cattle.

It has, through life, been a favorite object with this agriculturist, to set such an example of judicious and systematic husbandry as any farmer, of moderate means and some enterprise, might follow with safety and advantage. The land being in an exhausted condition, he determined to render it gradually more productive, without any great outlay of capital at any one time. Although his means have for many years, been ample, and the temptation sometimes quite inviting, to enter quite largely into improvements involving quite an additional investment, he has still adhered to his original determination. The improvements have been made to pay as he went along, and the farming business has not been suffered to run in debt to him.

The mansion and farm-buildings stand upon rising ground, a little back from the public road, the elevation affording quite an extended view of the adjacent country. The land rises gradually back of the buildings, terminating in quite an eminence, which commands a fine prospect of great extent, in every direction. About every acre of the estate, on either side of the slope, may here be seen. The mansion is approached, in front, by successive flights of granite steps, with turfed terraces intervening, filled with a variety of shrubs and low-growing trees, with ornamental foliage, arranged and cultured with much taste by the ladies. The house was built by the former proprietor; it is spacious, with an aspect most rural and comfortable. The farm-buildings combine every thing desirable for convenience, neatness and order in their arrangement. In the rear of the buildings is an ample kitchen-garden, and a fine young orchard of ingrafted fruit of 15 acres. A southern slope is deemed highly favorable for fruit-trees in that bleak country; and the fine appearance of this orchard would seem to substantiate it. The fences are all durably built, and kept in good repair. A farm-road runs nearly through the premises, dividing them about midway. Strong and conveniently hung gates, with granite posts, are placed along this road. They have been erected at different times, as the materials could be advantageously procured in the way of an exchange trade; thus exemplifying the determination before stated in proceeding gradually and judiciously in outlays for improvements.

The Barns—The principal barn is 105 feet long by 43 feet wide, with 20 foot posts. In stowing away hay in this barn, the mows are gradually laid out on each side until they meet, forming an arch over the floor sufficiently high to walk under. All the room over head can thus be filled with hay. Stables run the whole length of the barn, on the south side, with a cellar underneath them. There is another cellar for roots at one end of the barn, well finished and ventilated, and convenient for feeding the cattle. A grain-barn, 35 by 26, stands a little back upon the side-hill, with a basement story, open on the south side, for the storage of every farm implement. This is the "place" for every tool not in use, and here it may be found, "in its place."

When the large barn was built, it was most thoroughly underpinned with granite, and the cracks made perfectly tight with mortar. It was soon found that the sills and sleepers began to rot, by reason of moisture, and confined air, and three or four feet of the bottom of the hay-mow was damaged from the same cause. It became necessary to remove the underpinning between the posts: and a circulation of air is now deemed of importance, for the preservation of the timbers and the sweetness of the hay, in the bottom of the mow. It is thought that the cellar should be left open on the south side, for the health of the cattle, as well as for the other considerations named.

The corn-house stands a little away from the other buildings. It is set upon substantial granite posts, about three feet above the surface of the ground. Smooth slate-stones are placed on top of these granite posts, projecting over them several inches, on all sides, which effectually keeps out the rats. Light, moveable steps are placed at the entrance, when it is necessary to pass in and out with grain, and are removed when not in actual use. There are bins in this building for the storage of all kinds of grain raised upon the farm, as fast as it is threshed.

Care of Stock—Judge Hayes is very considerate of the comfort and consequent thrift of his farm stock, during the inclemency of the winter. I give his own concise and sensible remarks upon this subject:—

"The cattle are fed several times in the morning, and carefully carded; and at about 9 o'clock turned out for water and for exercise. While they are drinking, the stalls are cleaned, and supplied with fresh and clean litter, and in an hour or two they are again tied up. If the weather is stormy or very cold, they are permitted to return to their stalls as soon as possible; but if the weather is mild, they are suffered to remain out longer, but not more than two hours. They are fed in their stalls several times during the day, always giving a little at a time. In the afternoon, they are again turned out and watered, and suffered to remain out as long as in the morning. The stalls having been again cleaned and littered, the cattle are again tied up for the night. Great care is taken to make the barn warm. When the weather is very cold, the windows and doors are closely shut. In this way, the cattle, being more comfortable, are kept at much less expense and thrive better.

"My business calls me often to ride through the county of York, and it is distressing to see seven-eighths of the stock, (working oxen excepted,) exposed to the severity of the weather in cold winter days, from morning till night, without shelter. Cattle so situated will take little exercise, but stand shivering with the cold, not being able to lie down comfortably on the cold melting snow. It is a mistaken notion that cattle and sheep should be much exposed to severe cold weather to render them hardy. Some farmers say they leave their cattle out, because their business calls them away from home. This is a poor excuse. It would be much better to turn their cattle out for water only once each day, and tie them up immediately after drinking, than to leave them out all day exposed to the open air. Then the humane farmer, when gone from home and exposed to the storms of our inclement winter, may feel some satisfaction in the reflection that he has discharged his duty to his live stock, by placing them in a dry and warm shelter."

Manufacture of Manure—Lands that are in good condition, are kept so with comparative ease; but those that have become exhausted of their vegetable matter by a course of skinning, are with much difficulty made productive. While in this state, they soon pack down into a hard and lifeless condition, after being plowed, and of course, are far more susceptible to drouth. It is impossile for the roots of cultivated plants to expand or find nourishment in them. Compost manure, having vegetable matter for its basis, and the necessary salts well developed in its combination, being liberally supplied to these infertile soils, renders them more permeable to heat, air and moisture; it operates as a sponge in the soil to attract and retain moisture; and it contains the elements of a robust life for the growing crop. We see that nature every where forms a rich vegetable mould for her heavy forests to rear their towering heads, or her broad prairies to luxuriate in their variegated and exuberant foliage. A main dependance, then, in bringing up an exhausted soil to a state of productiveness, must ordinarily be upon augmenting the amount of vegetable matter in and upon the soil.

It has been a favorite object with Judge Hayes, to turn every thing of this kind to the best account. He preserves the vegetable matter of the decomposing sod, from the dissipating influence of sun and wind, by one careful plowing; leaving it in its inverted position through the whole rotation of crops following. All the waste vegetable substances that are to be found on the farm, are annually gathered up and carried to the barn-yard and piggery, to be converted into manure for the tillage fields. Quantities of leaves are gathered in the fall, and even late in the spring, for littering the cattle and swine. The bushes, ferns and coarse grasses, left by the cattle in the pastures, are annually mowed and carted to the yards; and a better herbage coming in, the quality of the pastures is improved. The sour, coarse grasses of the unreclaimed lowlands are brought to the barn and stacked outside, to be used for littering the stalls. All the refuse straw is saved for the same purpose.

The large barn is placed upon a side-hill, with yards all round it. Spacious apartments are thus afforded for the different kinds of stock, and also places of deposite for the various materials to be converted into manure, in the different stages of their decomposition or manufacture. The yard on the north side of the barn has been dug out from the side-hill, and has a bank wall to prevent the caving in of the road above it. It is therefore a convenient place for the deposite of materials that require more than one season to rot them. To this place all the potato tops, coarse grass, brakes, bushes of one years' growth, and any and all other coarse vegetable substances are brought and tipped off. The industry and care exhibited in the collection of these materials is most commendable, and in the course of the season their accumulation becomes very important.

There is a deposite of swamp muck, covering several acres, from 8 to 15 feet in depth, within a few rods of the barn. The road is a little descending all the way from the swamp to the yards, and they are well covered with it each year, at little expense. A good coat is also spread over the bottom of the barn-cellar. This cellar was commenced some time after the barn was built. It has been enlarged from year to year by throwing the soil under the barn, back upon the manure, in about equal proportions with it, at suitable intervals during the winter.

The yards are plowed and dug over several times during the season, and more muck, soil, lime or ashes are occasionally added to absorb all the gases, the bad and unhealthy odors. From 10 to 30 casks of lime have been annually used in the composts. Judge Hayes thinks that so far as the uninterrupted health of his family may be considered a test in the case, the prudence and benefit of the practice, on this score only, are fully established. Early in the spring, the contents of the cellar are overhauled, from end to end, which is thought to promote all the desirable decomposition before carting on to the soil.

The horse-barn stands near the out-buildings of the house, and the manure is thrown into a yard excavated and walled up, excepting at the lowest end. A stoned drain, leading from the house to this yard, with a considerable descent, conducts all the wash of the house, and the night soil, on the horse manure, keeping it sufficiently moist to prevent too rapid fermentation. Muck, soil, &c. are occasionally added, and three or four hogs are busily at work amongst it. Should the drain at any time become offensive, there is an abundance of water at hand to flood it and remove impurities. The horses stand upon several inches of tan-bark which has been previously exposed to the atmosphere for several months. After becoming well saturated with their urine, it is thrown out with the manure, and is thought to be a good material for the soil of the lowland meadow.

Judge Hayes related an interesting example, in the case of a neighboring farmer, of the advantage of a diligent collection of materials to be converted into manure. A young man came into possession of a poor, run-down farm at the death of his father. Being of an enterprising turn, and desirous of bringing up the homestead to a more productive state, he applied to the Judge for advice as to the kind of husbandry to be adopted. He was told to collect materials for increasing his manure. To cover the yards and litter the stables with the best material he could command; and if nothing better could be procured, to take sand or gravel,—or at any rate, something,—to absorb the liquid and gases of the manure from the stock. As the farm afforded no muck, the young man commenced by carting in turf and soil from the road-side. The stables were sprinkled with loam, daily, to absorb the urine. When this resource failed, he carted turf and soil from the fields. In a few years he was enabled to more than double the stock and dairy produce of his farm, through the increased productiveness of the fields; and this again increased the facilities for making manure. His farm is now productive, and with ease he lays by a handsome sum annually, from the products of his dairy.

The Piggery—The excellent arrangements for the swine, and the ingenuity of Judge Hayes in his manufacture of manure from this source, are so much better described by himself than I can do it, that I quote his own remarks:—

"My hog stye is seventy feet long and seventeen feet wide. There is one aisle on one side, and seven partitions for hogs on the other. A place for dressing the hogs, and kettle for cooking their food, are in the centre. Doors are so placed that the swine may be removed from one apartment to the other, and to the area for dressing them. There is a row of yards on the side of the stye, one for each apartment. The doors leading to these yards are hung at the top, so as to swing either way, and thus the hogs may go in or out at their pleasure, and always have their doors, when desirable, closed after them. These doors should be made of plank or double boards, to render them so heavy that the wind will not keep them open in cold stormy weather. The hog is proverbially called a dirty animal. This depends very much on his *education*. If he has been *brought up* with dirty habits, he will continue in them, unless great pains are taken to change them. But on the contrary, if he has acquired good habits, he will endure great suffering to avoid a filthy action. Hogs in this land of barren soil are especially valuable for making manure. I could never obtain much advantage from the rooting of well fed swine; but the quantity of urine they discharge is very great and valuable. It is very important that the evacuations of the hog should always be deposited on the manure heap. If they are discharged in the stye or in his nest, they will be principally lost. Now by observing the regular habits of this animal, and taking a little pains, a bad habit in this respect may soon be cured. The confined hog always goes to a wet place to make his evacuations. If then, you wish the hog to change his place for doing this, dig a small, hollow place in the manure heap, and keep it wet for a few days by turning in water occasionally; at the same time make the place clean and dry which you wish him to abandon. He will then probably go to the wet place in the manure yard to make his deposites; but if he should not do so, fasten him out from the stye for a few days, so that he shall be compelled to go to the desired place, keeping the place you wish him to abandon, clean and dry in the mean time, and you will, without fail accomplish your object. This to some, will appear a low, trifling subject to write about, but the farmer, to thrive, must attend to small concerns. I usually keep ten old hogs on my farm, and pigs to supply their place. They are fed with the waste of the kitchen, dairy, and with boiled roots, apples and some meal."

We are informed that it is a proverb with the Flemish farmer, that "manure is the god of agriculture;" and with the Scottish farmer, that "muck (manure,) is the mother of the meal chest." These are strong and significant expressions; but one seems to find them pretty fully realised in the husbandry of Judge Hayes.

In my next communication, I propose to continue my sketches of this gentleman's farming, under the following heads:

1st. Management of the Arable Land
2d. Improvement by Mixing Soils.
3d. Improvement of the Pastures.
4th. Draining and reclaiming Wet Lands.

Brattleboro', Vt. Dec. 25, 1848. F. Holbrook.

One house in New-York, shipped on one day recently, 983,445 lbs. cheese for Europe, valued at $68,841.

The Poultry Yard.

Varieties of the Domestic Fowl.

In our last, we described several of the original stocks and wild species of the fowl. The domestic varieties which have sprung from these, are very numerous—a circumstance which need create little surprise, when it is considered that the bird has been in a state of subjugation for several thousand years, and has passed from one country to another over the principal portion of the globe.

Game Fowl.—Of the domesticated breeds which are believed to retain in a striking degree their original characters, the game fowl, fig. 15, is entitled to the first rank. **Martin**, in his late work, as we have already quoted, (see last number,) conjectures that the beautiful variety of the game fowl called the "black-breasted red," may have been derived from a species of India jungle fowl. He further mentions that "the Earl of Derby possesses a breed which has been in possession of that noble family for many generations, and which is sedulously preserved from base alloy. It is a black-breasted red, with a purple band across the wing, and though superior in size to the Bankiva jungle-fowl, it closely resembles that bird in plumage and in elegance of contour."

15—GAME COCK.

Although the fowl was found in a domestic state in Britain, at the time of the Roman conquest, it is probable that the game breed was introduced after that event. Martin remarks that the ancient Greeks possessed several renowned breeds of game fowls, and that Media and Persia possessed others of first rate excellence; but he thinks it probable that this breed was introduced by the Romans, who are supposed to have derived it from the Persians, when Britain was a Roman colony.

But whatever may have been the way in which the game fowl was carried into England, it has long been there cultivated with such care, and has attained such perfection, that it has been by some naturalists expressly denominated "the English Fowl."

Formerly, the great inducement for keeping the game fowl, was its employment in cock-fighting, a barbarous sport, which has for several years been forbidden by law in England, and several parts of this country; but the breed is still preserved by many, not, as has been observed, "for fighting, but for its beauty, its purity, and ancient lineage."

There are several varieties of the game fowl, each of which has or has had its admirers and patrons. The points which distinguish the best, are given as follows

" The head ought to be small, the eyes large and brisk, and the beak strong and hooked at the setting on; its color ought also to answer to that of the principal or general color of the feathers, whether they be yellow, reddish, or gray. The beam of his leg ought to be very strong, and according to his plumage either blue, gray or yellow; and the spurs ought to be rough, long and sharp, a little bending and pointing inward. The three colors esteemed in a game-cock are gray, yellow, and red, with a black breast."

" It is not," says Martin, " for its pugnacious qualities that the game fowl is to be noticed—it yields to no breed, nay, perhaps is superior to most in the whiteness and sapidity of its flesh; the hens are excellent layers, and the eggs, though of moderate size only, are remarkable for the delicacy of their flavor. The game-cock is very attentive to his female train, and ever ready to do battle in their defence, but not unfrequently he becomes savage and dangerous. We have ourselves more than once been fiercely assailed by a game-cock, and be it observed, a blow from his spur is no trifle; several instances have come under our notice in which children have been severely injured, and we have read and heard of cases in which children have been killed.

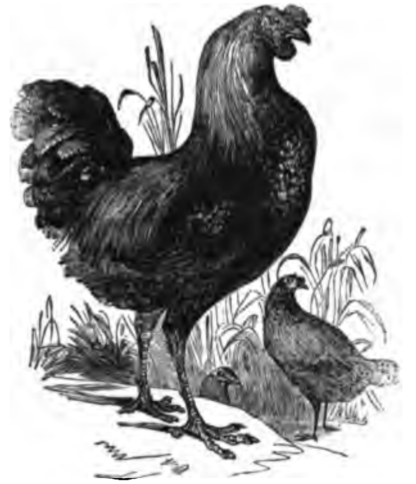
" Of all the breeds, in our eyes, the game breed is the most beautiful, whether we look to contour or to colouring; the cock carries himself proudly yet gracefully; his port and bearing proclaim his fiery spirit; his undaunted mettle, which endures even to his last breath, for while postrate and mortally wounded he will answer the insulting crow of his victorious rival, and make a last effort to revenge himself before the spark of life is extinct. No wonder that the gallant cock should have been chosen as the emblem of courage."

The game fowl has been introduced into this country and is bred by several amateurs in great beauty and perfection.

GREAT MALAY FOWL.—This is undoubtedly descended from the *Gallus giganteus*, which is a native of Java, Sumatra, and probably, of other parts of southern Asia. It is still found in the islands named. But we are informed by various travellers that it is kept in a domesticated state not only in India, but in the Malay peninsula, in Cochin-China, and China. It has long been known in Europe and America. It is unquestionably the parent stock of the kinds known under the names of Malay, India, Chittagong, Java, St. Jago, Cochin-Chinese, Chinese, and in some parts of America, as the Bucks County, and Ostrich fowl. A cross of it probably prevails in all the larger breeds. The trifling differences which appear in the kinds mentioned, Martin attributes to the influence of domestication and accidental or designed crosses.

The accompanying portrait, (fig. 16,) is given by Martin as representing the truest type of the species—*G. giganteus*. He gives the following excellent description of the bird:

" The male, in his natural attitude, often considerably exceeds two feet in height, from the ground to the crown of the head. The comb extends backwards in a line with the eyes; it is low, thick, destitute of serrations, and has the appearance as if its ridge had been cut off. The wattles hanging from the under mandible are small, and the throat is bare. The neck is long, and covered with hackles of a pale golden reddish color, which extend to the upper part of the back. The middle of the back, and the lesser wing coverts are of a deep chestnut, and the webs of the feathers are disunited; the greater wing coverts are glossy green; the secondaries and quill-feathers are of a pale reddish yellow on their outer webs. The hackles of the rump are long and drooping, and are of a pale reddish yellow. The tail feathers are of a glossy green. The under parts are generally of a glossy greenish black, with high reflections, each feather being of a deep, chestnut at the base, producing somewhat of a mottled appearance, especially if the plumage be a little deranged. The body is stout, and the legs are long, but very robust. In proportion to the size of the body, and length of the neck and limbs, the head seems small, and is far from being pleasing in appearance, the curtailment of the comb and wattles seeming the result of injury or malformation. The gait is heavy and destitute of alertness, and the bird, as we have frequently seen, often reposes resting on the tarsi or shanks, their whole length being applied to the ground. The emen rests in the same manner. The attitude is uncouth, and gives the idea of the bird being oppressed with its own weight. It is very probable that this gigantic fowl is less disposed to mount the trees and roost on the branches than most others of the genus; and this strange attitude may be the ordinary mode of taking repose. The crow of the cock, instead of being a clear ringing tone, heartily delivered as if in defiance of every rival, like the blast of the knight's clarion on the listed field, is short, hoarse, and monotonous, more like a croak than a crow."



16—KULM OR MALAY FOWL.

As before remarked, this race, in a domestic state, presents considerable variation of characters; but we agree with the author above quoted, that the stock represented by the cut shows the greatest purity, and indicates the least departure from the original. The breed in its pure state is generally not handsome, either in form or plumage, and its flesh is coarse and wanting in flavor. It is chiefly valuable for crossing varieties, in which increase of size is desirable. Much, however depends on the manner of breeding. By care and judgment in selecting the best formed and finest boned specimens for propagation, the breed can be greatly changed and improved in the course of a few generations. Several instances of this kind have occurred under our own observation. The celebrated Cochin-China fowls kept in Queen Victoria's aviary, are regarded by Martin as only a sub-variety of the great Malay.

Valuable stocks have originated by crossing different branches of the Malay with other breeds. Dickson thinks it is very probable that the Dorking originated by a cross between the Malay and the game fowl. A writer in the Scottish *Quarterly Journal of Agriculture* is of the same opinion. The Jersey-blue indicates a similar mixture.

As we commonly see the Malay, it possesses but little spirit and courage; yet a variety of the race is cultivated in India, which is *game*. We saw some specimens of this game stock, twenty-five years ago. They were mostly white, but in general characters corresponded to the figure and description above given, except that they were less in size, and were much more active. In courage they were unflinching; and the young would sometimes pick out each others' eyes, and tear their heads bare to the skull, before they were old enough to crow.

A breed was established in England about seventy years ago, by the Duke of Leeds, called the "Shakebag" breed, which obtained great celebrity, for the strength and prowess of the cocks. Martin observes that "this breed was probably formed by a cross with the *Gallus giganteus;* the male frequently exceeded ten pounds in weight, and to his great strength is added spirit and determination." This breed is thought to be now extinct. It was sometimes called by authors the "shack-back," or "shag-back" breed; but Martin suggests that as it was formerly the practice in cock-fighting to challenge all comers with the cock *concealed in a bag*, "the tremendous power and size of the Duke of Leeds' fowl, proved so superior to those of all competitors, and usually securing conquest, it eventually obtained the name *par excellence*, of *Shakebag*. which was corrupted to the other terms."

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Raising Fruit Trees—Inquiries Answered.

A correspondent in Virginia, makes the following inquiries:—

Will apple, pear, and quince seeds lose their vitality by being kept dry in boxes six or twelve months?

[They would probably be more or less injured, and perhaps in some cases wholly spoiled. Pear seeds have been kept dry a few months, and after exposure to moisture and frost, have vegetated finely. In other cases, apple and pear seeds, so treated, have nearly failed. Security would direct that the seeds be kept moderately moist from the time that they are taken from the fruit. After having become much dried, moisture and frost operate in softening and splitting the horny covering.]

Should peach stones be planted immediately after the fruit is taken from them, and will they come up well when taken from under the trees and planted at this season of the year [late autumn,] where they have been lying since they fell from the tree; and will the stones which have been kept dry in boxes the same length of time, come up as well as if planted fresh?

[In all cases, the seeds of fruit trees are best if as fresh as possible; but peach stones may be kept some months dry with small injury. Some nurserymen plant them after the lapse of a year, but they do not often succeed so well. Under the tree, shaded from the sun, and in contact with the moist earth, they might dry but little; and again, if in hot sunshine and on dusty ground, they might suffer severely. They should always be cracked before planting, in which case freezing is not necessary, but only facilitates the splitting of the stone. Too much moisture spoils them.]

Which are twenty of the best peaches, and twenty of the best plums?

[*Peaches*—Early York (serrated,) Early Tillotson, Cole's Early Red, Cooledge's Favorite, White Imperial, George IV, Grosse Mignonne, Bergen's Yellow, Large Early York, Large Red Rareripe, Bellegarde, Early Newington, Nivette, Morris' White, Old Mixon Free, Crawford's Early, President, Noblesse, Crawford's Late, Druid Hill.

Plums—Primordian, Imperial Ottoman, Lawrence Gage, Early Orleans, Purple Gage (genuine,) Red Diaper, Purple Favorite, Red Gage, Jefferson, Imperial Gage, Lombard or Bleecker's Scarlet, Washington, Green Gage, Bleecker's Gage, Huling's Superb, Coe's Golden Drop, Frost Gage, Blue Imperatrice.]

The seed of what plum trees are best to raise stocks from?

[On strong soils, where the plum flourishes well, any thrifty growing healthy sort may be taken, as the horse plum. On soils less favorable, those sorts least liable to cast their leaves prematurely will usually be found best. Some of the most vigorous varieties of the wild plum are well adapted to light or sandy soils.]

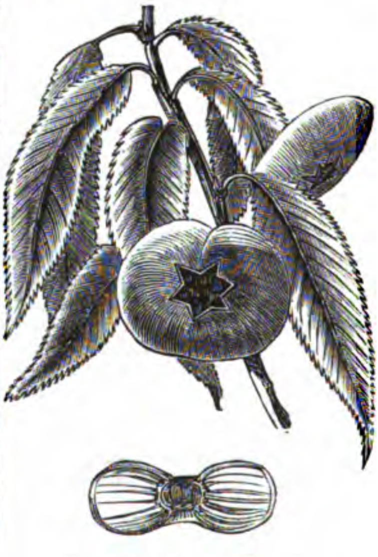
Which are the ten finest Raspberries, and which the ten best Gooseberries?

[Fine varieties of the Raspberry are not numerous. The Red and the Yellow Antwerps are the old standards. For a hardy variety in the northern states and on strong or heavy soils, probably none exceeds the genuine Red Antwerp. The Franconia and Fastolff resemble it, and are both fine. The Red Cretan has proved very productive on light soils. The common Red Garden Raspberry, is a good early sort. The American White, and American Black, are distinguished for their high flavor, though rather small in size.

Out of the hundreds of English Gooseberries, very few have been so widely cultivated in this country as to enable one to pronounce upon their general adaptation and excellence. Among these, the Roaring Lion, Crown Bob, Whitesmith, Waterloo, and Champaigne, are fine, and have perhaps succeeded as well as any.]

What is the form, size, color, &c., of the Chinese Flat Peach?

[It is so flat or compressed on its base and apex, as nearly to resemble a wheel, the transverse diameter being nearly 3 inches, while the distance from the stem to the crown is only about ¾ of an inch, a mere skin covering the stone at each end, (fig. 17.) It is pale yellow, reddened in the sun, and is said to be a good melting peach. It has not fruited in this country.]



17—FLAT PEACH OF CHINA.

The Double Brugmansia.

Among house-plants, one of the most magnificent is the BRUGMANSIA. The old *Brugmansia suaveolens*, formerly known as the *Datura arborea*, has been long in cultivation, and is remarkable for its large, pure white, bell-shaped or trumpet-shaped pendant flowers. Loudon states, in his Suburban Gardener, that "in the garden of —— Durant, Esq., at Putney Hill, Brugmansias have grown and flowered to a degree of perfection which would hardly be credited by those who have not seen the plants. Some of them are nearly six

18—DOUBLE BRUGMANSIA.

feet high, with woody stems three inches in diameter; and one in the summer of 1837, bore upwards of 2,000 flowers." The treatment they received, was to keep them in the frame in the reserve ground during the winter, and to turn them out into very rich soil, late in the spring, and keep them well supplied with water during summer. It must be evident at a glance that so large and vigorous a plant needs a pot or tub of very large dimensions. When well treated, it continues in flower for several months during summer and a part of autumn.

The Double Brugmansia, (*B. Knightii,*) figured above, and taken from a late number of the *Horticulturist*, an exact portrait of a fine specimen in possession of the editor, is thus described in that interesting Magazine:—" The flowers are pure white, long trumpet-shaped and double,—one tube being inserted within the other. The immense size of the flowers—each about nine inches long, and the curiously ruffled appearance of the lower part of the corolla, make it a most conspicuous object when in full bloom. Some specimens, six or eight feet high, which we saw in full bloom at Montgomery Place lately, were the most superb and striking objects in the large and beautiful flower garden of that demesne."

Culture of Strawberries.

A practical man, who writes in the Horticulturist, says: "Strawberries can be produced in great abundance, and with more ease than any other valuable fruit. With a moderate degree of care and attention, they will yield at the rate of *one hundred bushels* per acre. They will grow freely on any soil that will give a good crop of corn; and if planted early in spring, will yield a fair crop in June." He says a common error is to plant them in old worn out garden soils, or to manure them too highly, which gives vines, but no fruit. The best is a *good, deep, new soil,* not excessively rich.

Pruning Transplanted Evergreens.

The following interesting experiment, showing the equal importance of pruning evergreens and deciduous trees, when transplanted with mutilated roots, is given in a late number of *The Horticulturist:*

" In April last, I obtained at Flushing, twelve trees of the Norway Spruce. They were sent to me as they are grown in the nurseries, with the limbs starting from the roots. They were very badly taken up, and still worse packed. The small amount of moss which was put around the roots was entirely dry, and the roots themselves were badly bruised and broken in taking up or on their passage.

" Three of the best of the trees I set out in the shaded grounds about my house, leaving all the limbs untouched.

" The remaining nine were planted on the adjacent streets, exposed to the full blaze of the sun, and the reflection from the dry dust; and thinking that the condition of these nine trees required decided remedies, I pruned them severely, leaving only those limbs which were within a few feet of the top.

" They were all planted in the most careful manner, were well mulched and watered, but the three first mentioned were watered most frequently, and were protected most of the day by the shade of other trees. Now for the result: all of the trees on the street are alive, and eight of them have thrown out shoots several inches long. The ninth stands in an unfavorable position;

but the buds are just now beginning to push, and the tree will live.

"Of the three trees planted about my house, one died early, though watered daily. One still retains its leaves and partially its green color, but shows no other sign of vitality. The third is in much the same state with the ninth, above mentioned; but if anything, its condition is less favorable. I think the trees could not have been saved without the severe pruning which they received."

Horticultural Miscellanies.

Tulip.—In Persia, where the tulip is abundant, it is considered as the emblem of perfect lovers. "When a young man," says Chardin, "presents one to his mistress, he gives her to understand, by the general color of the flower, that he is on fire with her beauty, and by the black base of it, that his heart is burned to a coal." A burlesque on floral emblems.

Prices of Tulips.—The tulip trade of the Netherlands was at its height in 1634—5—6. One root called the *Viceroy*, was sold for articles valued at 2,500 florins, equal to 250 pounds sterling. The *Semper Augustus* sold for 2,000 florins; one person agreed to give 4,600 florins, with a new carriage, two horses and harness; and another agreed to give 12 acres of land, for a single root. This may seem very wild to us; but multicaulis and other speculations have existed nearer home.

Pruning.—It is said that the browsing of the goat gave the first idea of pruning the vine; and that the burning of a rose tree, causing it to sprout up afresh, led to the pruning of the rose.

Breathing Pores of Plants.—Plants are covered with a thin skin or epidermis, which is pierced with numerous invisible pores, called *stomates*, through which the plant breathes and perspires. In some plants there are as many as 70,000 of these pores to a square inch of the leaves; and the pores themselves, which are oblong or oval, are in some instances only the 2500th of an inch long.

Early Fruit.—A Mayduke cherry, trained against a south wall, and another tree of the same variety, in the open ground of a sheltered garden, were found, by J. Kyle, near Edinburgh, to differ a fortnight in the ripening of their fruit, the wall fruit being the earlier.

A Thundering Fountain.—The largest artificial fountain in the world is at Chatsworth, the seat of the Duke of Devonshire, England. It shoots up, almost like lightning, a column of water, 267 feet high, more than one hundred feet higher than Niagara Falls, and about 50 feet higher than the Bunker Hill monument.

Influence of the Moon.—Some of the ancient Romans, governed their gardening operations rigidly by the age of the moon. One author, quoted by Varro, says, "I observe these things, not only in shearing my sheep, but in cutting my hair, for I might become bald if I did not do this in the wane of the moon."

Pleasing Deceptions.—In Cardinal Richelieu's Villa at Ruell, according to Evelyn, at the end of a long walk, was "the arch of Constantine, painted on a wall in oil, as large as the real one in Rome, so well done, that even a man skilled in painting may mistake it for stone and sculpture. The sky and hills, which seem to be between the arches, are so natural, that swallows and other birds, thinking to fly through, have dashed themselves against the wall." Speaking of the residence of Count de Liancourt, the same writer says, "towards his study joins a little garden, which, though very narrow, by the addition of a well painted perspective, is to appearance greatly enlarged; to this there is another part, supported by arches, in which runs a stream of water, rising in the aviary, and seeming to flow some miles, by being artificially continued in the painting, where it sinks down at the wall."

Disagreeable Deceptions.—Contrivances for playing tricks upon visitors were common in princely gardens in the last century, by squirting water suddenly upon them from unexpected sources. In one case, a huge copper serpent, started up and moving round swiftly, shot from its mouth a shower on the spectators. In another, two musketeers [artificial] shot streams of water upon them from their musket barrels. In one of the finest gardens in England, visitors are suddenly treated with a ducking from the numerous branches of an artificial tree. Such low trickery is only fit for ill-bred school boys. More justifiable was the punishment inflicted on lawless curiosity, where a forbidden door was labelled, "Don't open this,"—and as soon as it was moved upon its hinges, a dashing shower bath came down from above.

Cucumbers.—The village of Sandy, Bedfordshire, has been known to furnish 10,000 bushels of pickling cucumbers in one week. Loudon says, "In March, cucumbers fetch in the London market a guinea a dozen; in August and September, one penny a dozen."

Use of Leaves.

We noticed, last autumn, the case of a plum tree, which lost all its leaves by leaf-blight, before the plums were fully grown, which continued stationary till a second crop of leaves came out, when their growth recommenced, and they subsequently acquired a fine, rich, honied flavor.

A quite different case, but illustrating the same principle, was reported by the late President Knight. "A peach tree in my garden, of which I was very anxious to see the fruit, had lost, by the severity of the weather, all its blossoms except two, which grew upon *leafless branches*. I therefore endeavored to derive the necessary returning sap [to mature the fruit] from another source. To attain this object, the points of the branches, which bore fruit, were brought into contact with other branches of the same age, which bore leaves; and a part of the bark, extending in length about four times their diameters, was pared off immediately above the fruit. Similar wounds were then made upon the other branches, with which these were brought into contact; the wounded surfaces were closely fitted and tightly bound together. A union soon took place; and the fruit, in consequence, acquired the highest state of maturity and perfection."

Varieties of Strawberries.

Eds. Cultivator—The correspondent of *The Horticulturist* at Poughkeepsie, does not do justice to the seedling strawberry of Mr. Hovey, but does more than justice to the Early Scarlet. He enumerates four varieties. The Early Scarlet is what we term staminate, or hermaphrodite. The other three pistillate, and not one of them, by themselves, would produce a perfect fruit. As the writer says nothing of the sexual character of the plants, I take it for granted that the poor Hovey was in a bed by itself, and so far from the Early Scarlet, as to admit of no intercourse, unless from a chance insect passing from the blossom of the one to the other. The Bishop and Hudson, as they bore better, were, I presume, in closer proximity. I would here remark, that I presume that the writer's Hudson, is not the true Hudson of Philadelphia, but the imported, necked fruit of Mr. Downing. The true character of the Hudson, will be discovered in a late publication of that veteran horticulturist, Mr. Landreth.

In Massachusetts, and in this state, and Kentucky, and wherever I have seen the Hovey, all the blossoms bear perfect fruit, where staminate plants are near, unless killed by frost. With us, some of its berries are larger than any other variety, measuring from 4 to 5½ inches, but its average size with us is less than the fruit of some others; never much exceeding the one half of the average size that Mr. Hovey claims for it in the vicinity of Boston; and from the silence of the Strawberry committee of the Boston Horticultural Society, I take it for granted that he does not err. With us, the season of its fruit is short, and the plants soon die out. Its size gives it deserved celebrity. We have two new seedlings, that promise to rival it in size, but it would not be safe to say so till we have had another year's experience. The Scarlet is, with us, among the best bearers of the hermaphrodite family, but will not produce with us, half the quantity of the Hovey, where planted adjoining. N. Longworth. *Cincinnati, Dec.* 15, 1848.

Preservation of Grafts.

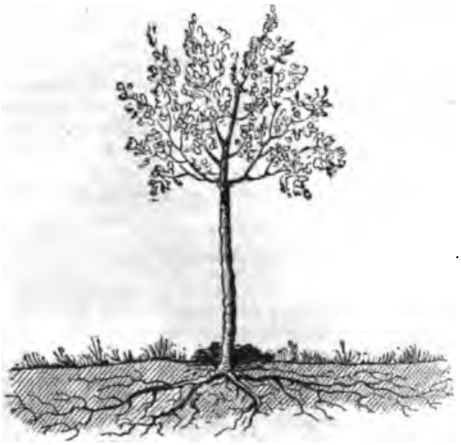
Eds. Cultivator—I have, during the past year, noticed several communications recommending the use of saw-dust for preserving scions. From my own experience, I find that it should be used with extreme caution, on account of its liability to heat, when a large quantity is used. A nursery firm with whom I am intimately acquainted, lost nearly their whole stock of apple roots and grafts, by packing them in sawdust during the past winter. I have found fresh loam, dug directly from the earth, much better than any other preparation for preserving grafts or roots, and every person engaged in this kind of work will find their operations more successful, the closer they stick to nature. Now in the way that grafts are usually kept, some become surfeited with water; others are shrivelled and dry, while others may happen to receive just moisture enough. The latter, if selected and set by themselves, will all be found to grow strong and healthy, which would not be found to be the case with grafts kept in a hap-hazard way, as is usually the case. When loam is used for keeping scions, it should be used bountifully, as it retains a more regular degree of moisture. I have sometimes wrapped bundles of grafts in newspapers, and afterwards buried them in loam, and they have kept in this way admirably; the paper seemed to absorb and retain just moisture enough from the earth to keep the scions in excellent condition. Isaac Hildreth. *Big Stream Point, Yates County, N. Y., Jan.* 2, 1849.

Quality of Melons in Central New-York.

Eds. Cultivator—Capt. M., of of the U. S. Navy, and at present a resident of this city, who lately doubled Cape Horn, and had frequent opportunities of eating melons in South America, says he saw none there equal to those raised in this city. So also, the Rev. Mr. K., once a resident of this city, but now an inhabitant of one of the Danish West India Islands, says that he has seen no melons in those Islands, equal to those he has eaten here.

Now why is this? Is it that our soil and climate are superior to theirs? Clearly not. The true explanation, undoubtedly, is this: Our short summers here are nearly tropical while they last. Melons therefore, that are forwarded so that they may ripen their fruit in the height of summer, mature their fruit under almost the same circumstances as in the tropics. This fact, connected with the superior care of our cultivation, secures a result which, at first, seems so very improbable. C. E. G. *Utica, Nov.* 1848.

Erratum. In the article on "Selecting Varieties of Fruit," after the words "900 different varieties," add, *of apples*. Also, in the same article, 2d column, 12th line, after the words, "TEN varieties," add, *of apples*.



Manuring Trees in Winter.

It does not always happen that the ground is made as fertile when young trees are set out, as it should be. In such instances, subsequent manuring is useful. No better season for this purpose can be selected than late in the autumn or during the winter, when rains or thaws may carry the soluble portions down among the roots, and the remainder be spaded in in the spring.

Now every person at all conversant with the laws of vegetable growth, is aware that the absorbing parts of roots, are the young fibres or spongioles, at or near the extremities of larger roots. In very small trees, these may be within a foot of the main stem; but as the tree increases in size, the circumference of the roots forms a larger and larger circle each successive year. While the tree is young, the length of the roots is usually quite equal to the height of the tree. As it becomes older, the roots near the base of the tree enlarge and become nearly destitute of fibres. Hence, the entire uselessness of the too common practice of applying manure closely around the base of the tree, instead of at a distance of many feet around. This practice is not less absurd than to pour water into a man's boots to allay his thirst.

Trees which grow in sod ground can never thrive so well as where the soil is kept mellow and free from vegetable growth. With young trees, the difference will often be as *ten to one*. Many, to avoid this evil, spade around their trees, but in so small a circle, that no benefit is derived; the young roots are far off from the tree and from this spaded circle, seeking, in a hard and dry soil, under the thick grassy covering, for a scanty supply of food.

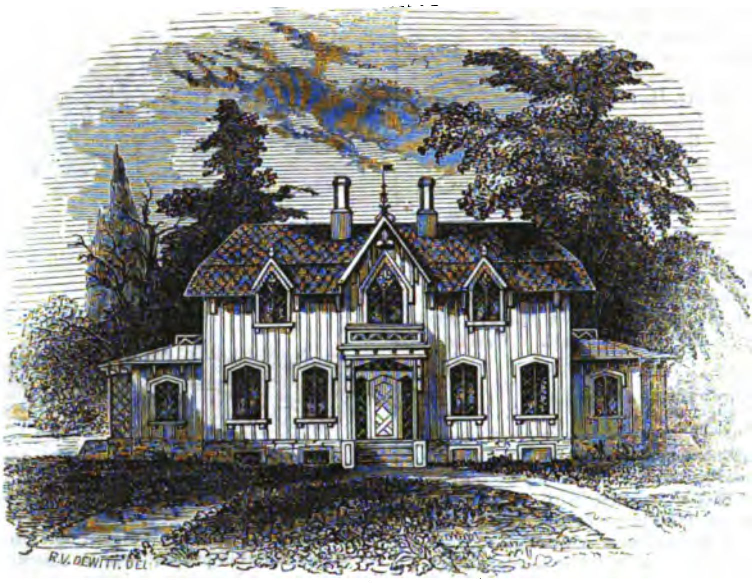
The above figure is intended to exhibit these errors, by showing how far from the effective reach of the roots, is the mound of manure or mellow soil at the foot of the trunk.

Apples for Canada.

Would it be advantageous to plant apple trees, to feed the apples to hogs, in a cold part of Canada, where land is cheap, and labor pretty high? In the affirmative, what kinds are considered best, for productiveness and hardihood? Will any of your correspondents answer? A. *Montreal, Dec.*, 1848.

Pear buds on Quince.

Good Growth.—In the summer of 1847, I put two pear buds in a quince stock—they both took—spring of 1848, headed down. They are now each 5 feet 1 inch high, and about ¾ inch in diamter. J. Bunch. *Chuckatuck, Va*

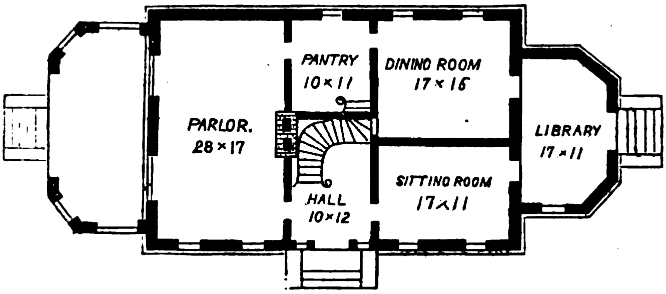

R.V. DEWITT. DEL.

17—ELEVATION.

Rural Architecture.

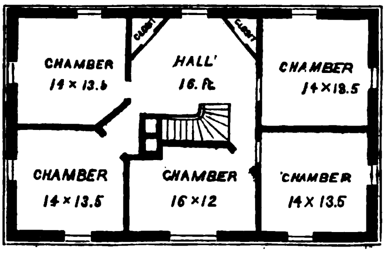
Design for a Suburban Cottage.

THIS cottage was designed as a summer retreat for a city resident, and an attempt made to combine in its plan and materials, as much economy as might be, consistently with a sufficient but snug allotment of space for a moderate family, with spare rooms for the hospitalities of a temporary retreat.



18—FIRST FLOOR.

There is on the principal floor—an entrance hall or vestibule of 10+12 feet, exclusive of the stairs to the upper story and basement. From this vestibule to the right, you enter a room 17+11, to be used as a sitting room, or as the principal bed-room. To the left, you enter a large parlor, 28+17 feet, opening by two large windows or glass doors, upon a veranda, which forms the left wing of the house; which being closed at the ends, and partially enclosed in front with lattice work, becomes a pleasant summer apartment. In the rear of the vestibule is a spacious pantry, 10+11 feet, communicating with the parlor on one side, and on the other with a dining room, 17+16 in the rear of the principal bed-room. The right wing is for a library or farm office, and is 17+11 feet.

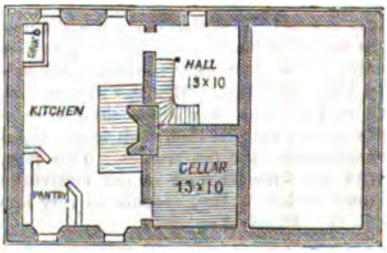


19—SECOND FLOOR.

The second floor furnishes four bedrooms, 14+13½ ft. each and another of 16+12—besides a hall or lobby of same size, with linen closets taken off its angles.

The basement plan shows a vestibule 13+10 feet, with a cellar of same size back of it. A kitchen extending under the parlor, and a corresponding room at the other end of the building, to be divided at will, and may have one or two bed-rooms for domestics partitioned off in it, besides spare cellar room.

Parlor, dining room, pantry, six bed-rooms of good size, besides basement. Sufficient room for a citizen's box. If the building is to be a farm-house proper, then the disposition of the lower rooms can be changed to suit the case.



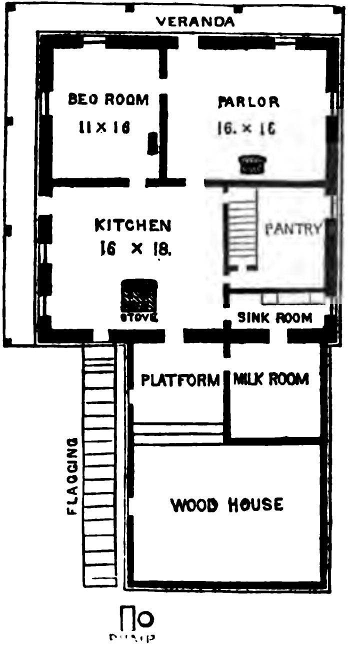
20—BASEMENT.

As shown in the elevation, the design is for an edifice with stone foundation and wooden frame, with boarding placed vertically, tongued and grooved, and the same covered with a ribbon or strip—(as in Design V. of Downing's Cottage Residences, 1842.) The roof to be made with a double pitch—the eaves to project well from the line of the wall, and to be supported and ornamented by brackets. The chimney to be finished with ornamental shafts, and the usual cheap but tasteful devices to be employed in giving a tasteful and picturesque appearance to the building, such as cutting the lower edges of the shingles in semi-hexagons, surmounting the dormer windows with acorns or fleur-de-lis—placing a balcony over the entrance door, and ballustrades on the roof of the wings; as suggested by the print of the elevation.

I have not made a proper estimate of the expense; but by referring to *Downing's Cottage Residences*, Design IV., I find that the amount of material and work is about equal in that case, to the above building. Allowing for a little extra work as to style and finish, say $2,200, and if built of brick, with more elaborate ornament. say $2,500. R. V. De Witt. *Albany*, 1849.

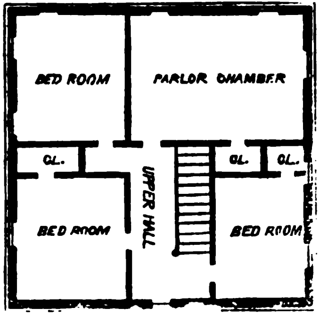
Poor Man's Cottage.

Eds. Cultivator—This house is to be 27+34 feet, one story and a-half high, or high enough to admit of those little attic windows, coming within three feet of the floor. The rear can be as large as is deemed necessary. A room is taken from the woodhouse, which will be nice to set milk in, in summer, and very convenient to keep fresh meat in the winter, and many other provisions which cannot be well kept in a warm pantry. I should, of all things, like a pantry thus situated.



24—First Floor.

Adjoining this is a place to wash, and make cheese in, during the summer, and to keep tubs, pails, baskets, mops and brooms—then the sink-room to wash dishes in, handy to the stove. There can be an opening between the sink room and pantry, to put the dishes through, which will be a great convenience. A stone should be placed under the cook-stove in the same manner that hearth stones are laid, level with the floor.



25—Second Floor.

If the veranda should be only in front, it would give the house a lenghty unpleasant appearance; by placing it around the side, it will improve the looks very much, and ought to be there to cover the door, opening into the kitchen—also to make it more pleasant in summer. After all, the shape of a house, depends much on the site, whether it be on an eminence, a side-hill, or on low level land—much also, is depending on the purse, whether it be deep or shallow. A Farmer's Wife. *N. Y.*

Sheep Husbandry.

How do flocks of Sheep Run Out?

Editors Cultivator—The opinion is quite prevalent among farmers, that flocks of sheep, that are several years confined to one locality, deteriorate, or as frequently expressed, "run out."

That flocks do sometimes deteriorate when confined to one locality, I do not doubt; but when such an event actually occurs, I apprehend it would be quite as judicious, and would quite as effectually restore the health and vigor of the flock, to dispose of the *proprietor* and retain the *sheep*, as vice versa. That this running out is owing to bad management, and *not* to any other local cause, I have no doubt, and it may be mainly included under two heads: First, in *breeding*; secondly, in *feeding*.

The system of close, or "in and in" breeding, beyond a given point, and that point not *very* remote from the starting point, I believe to be very injurious to constitutional vigor. But as the question has been discussed in your columns, I will not now enter into the argument.

Constitutional vigor in sheep, as well as in other animals, I regard as being of paramount importance; without it, light fleeces, deformity and disease, are constant attendants.

The form of a sheep should be as much the object of care and solicitude as the form of a horse; while the former with many is scarcely noticed, with the latter it is almost the only criterion of value. Who would undertake to say that a long-legged, thin-shouldered, narrow-chested, slab-sided, loose-jointed horse is possessed either of constitutional vigor or hardihood? Indeed, such an animal would be considered by every one as comparatively, if not utterly valueless; while thousands retain sheep equally faulty, from which to propagate, and at the same time, the well-shaped, the vigorous and hardy, which from these circumstances have a tendency to fatten, are sacrificed to the drover and the butcher's knife. Great care should therefore be taken not only in selecting *bucks* but breeding *ewes*. We should look at the *whole* sheep—should have an image of perfection in our minds, and make every selection with a view to attain that object. It is not texture of fleece or weight of fleece, or symmetry of form, separately considered, but the combination of the greatest number of desirable points and qualities.

The question arises in this connexion, how shall we dispose of the refuse of the flock? I answer, a separation should be made soon after shearing; the choice lambs and breeding ewes, intended for preservation, should be put into good pastures; no buyer or butcher should be allowed to look "over" into their enclosure. The refuse, or those devoted to *destruction*, should be placed, if possible, in better pasture, and should be fed for a month or two in the fall, with corn or meal, or with turneps, until fit for slaughtering.

As sheep increase in numbers, on a given number of acres, other things being equal, the amount of food per head, of course diminishes. What would fully feed fifty, might barely subsist seventy. Now let us look at the comparative profits. Good keep and poor keep will make at least one pound difference in weight of fleece. Say 70 head at 2½ lbs. per head, 70+2½=175 lbs.—50 head at 3½ lbs. 50+3½=175—making weight of fleeces equal. Loss by *winter-killing* on account of poverty, from the 70 poor sheep, say 10 head; 50 in good condition, *no loss*. The account now stands 50 to 60. The *increase* from 50 good sheep would doubtless be greater than from 60 poor ones; besides the wool account would now foot up 25 lbs. in favor of the good conditioned sheep. So that *well fed*, as well as WELL BRED, should be the wool growers' motto.

Sheep are large feeders, and require, especially in winter, much care. Large flocks should, particularly at that season, be divided into smaller ones, not to exceed fifty or sixty in each; the weak, and the strong, and the small and the large, being kept in separate parcels.

They can then receive care and feed severally, according to their respective conditions. A sheep in good condition, has a better appetite and will consume coarser food than one which is poor; but if suffered to run together promiscuously, they will crowd away the weaker ones, and appropriate to their own use the choicest of the food. Wool grows much faster in winter than in summer, therefore, as wool is formed or made of *feed*, and not of air, as some seem to suppose, it is necessary that keep and care be increased accordingly. Otherwise there will be an inevitable "falling away,"—the fat and muscle previously acquired, will waste away to supply the growth of wool.

During the next twenty years, the western part of Virginia, the state of Ohio, the hilly portions of Kentucky and Tennessee, with perhaps Indiana and Michigan, are destined to be the great wool regions. The east cannot compete with us in this article; but will find more profit in the products of the dairy, beef, mutton, and the coarser grains. CHAS. R. SMITH. *Solon, O.*

Different Species of the Ox.

The Gayal, Zebu, and Italian Ox.

In addition to the different species of the ox mentioned in our last, there are several others which it is proper to notice before we proceed to speak of the domestic races of Europe and America.

The *arnee* is a species of wild buffalo found in Bengal, and other parts of India. Its most striking characteristic is its enormous upright horns, which often measure from four to six feet in length.

Another wild species called the *gour*, inhabits the mountain districts of Central India. It is described as being nearly six feet high at the withers, with very clean-made and vigorous limbs, resembling in this respect, the deer rather than the bovine tribe. The color is brownish black, almost approaching bluish black. The hair is short, having the oily appearance of fresh seal skin.

The *yak* or grunting ox—*Bos grunniens*—exists in Tartary, both in a tame and wild state. It is, comparatively, of small size, covered with a profuse quantity of long hair, of a chocolate brown color. It does not *low* like the common ox, but only utters, when uneasy, a low grunting sound. It inhabits the coldest mountains and bleakest plains of Thibet. Its skin affords a comfortable covering for the inhabitants of those regions, and its flesh is used as food. The milk of the female, in a domestic state, affords butter, which is said to be of superior excellence. It is the custom of the people to preserve the butter in skins or bladders, in which state, being excluded from the air, it will keep in that cold climate for a year or more.

The common buffalo—*Bos bubalus*—is believed to be distinct from any species before mentioned. It is found in a semi-domesticated state in various parts of Asia, in northern and eastern Africa, and in southern Europe. In Sumatra, and in the forests of Abyssinia, it is found wild. It is used for labor in many countries, and the milk and flesh of the cow are used for food.

The *gayal*—*Bos frontalis* of Linneus—(fig. 26,) is found in southern Asia, both in a wild and domestic state. In general characters, this race more nearly approaches the domestic ox than any before noticed. The male is said to resemble our common bull in shape and appearance. It is of a blackish brown color; the horns short, thick and strong. He is naturally very bold, and will defend himself against any beast of prey—even against the tiger. In a domestic state it is used by the natives for tilling the ground, and is said to be more tractable than the buffalo. Travelers state that the cow is very quiet and is used for all purposes of the dairy, and the milk is said to possess a peculiar richness, which is supposed to be owing to the animals feeding on the young shoots and branches of trees, in preference to grass. Though generally considered specifically distinct from the zebu and from our common cattle, it is so nearly allied as to breed with both, and the offspring, in both cases, are fertile.

26—WILD GAYAL, OR JUNGLY GAU.

The *zebu* or humped race of India, (fig. 27,) is characterised by "narrow, high withers, surmounted by a large fatty hump; an arched back, rising at the croup, and then descending suddenly to the tail; slender limbs; a large pendulous dewlap, falling in folds; long, pendant ears, and a peculiar mild expression of the eye." The race is described as varying in size from that of our largest cattle, to a dwarf and often hornless breed, not exceeding a young calf in stature." The race is not confined to India, but is found in China, the Indian islands, on the eastern coast of Africa, and in the island o Madagascar. In ancient times it existed in Egypt.

Naturalists are not entirely agreed as to the question whether the zebu is a distinct species from the common ox. Cuvier regarded the races as identical. Martin, on the contrary, is inclined to believe them distinct. In support of the idea that the zebu has sprung from an original type, he cites the extreme antiquity of the race, and observes that from the earliest ages it has been an object of veneration in India—that it is found carved on the oldest temples—that its figure is found on the tombs of Thebes, and on the sculptured remains of Egyptian antiquity, which are traceable two thousand years before the christian era, the characters presented being the same precisely, as those possessed by the animal at the present day.

An additional evidence of the distinctness of the zebu, from our common cattle, is its voice, which approaches more to a grunt than the lowing of our kine. The races also differ in style of coloring.

It is admitted, however, that the zebu will interbreed with our common cattle, and that they produce a fertile progeny; but a similar result not unfrequently occurs with distinct, though nearly allied species.

The zebu has been in several instances introduced into Europe, and we have known of one importation having been made to America. The late Gorham Parsons, Esq., of Brighton, Mass., had several individuals of this race, which we recollect having seen on different occasions, at his farm, and also at the cattle shows formerly held at Brighton. The bull resembled the cut here given. The cows were smaller than the bull, and had a less prominent hump. Mr. P. reared a pair of steers of this race; and we believe he made some crosses between the bull and cows of different breeds. It is many years since we saw any of these cattle. We think it probable that none of their descendants are in existence. Perhaps some one can tell us their history.

The large zebu is much more active than any of our common cattle. It is used in India for various agricultural purposes, as well as for carrying burdens, and for the saddle. The bulls are used for carrying military dispatches. It is said "they will travel with a soldier on their back, fifteen or sixteen hours in a day, at the rate of six miles an hour. Their action is fine, and they bring their hind legs under them in as straight a line as the horse. Such is their activity that they can clear a five-barred gate with ease."

27—LARGE ZEBU OR BRAHMIN BULL.

The Domestic Ox—*Bos taurus.*—From the preceding notices which have been given of the different species of the bovine tribe, it will be perceived that none of them, except, perhaps, the Asiatic gayal, can be regarded as identical with the domestic ox, and the most reasonable conclusion is, that the latter had an origin distinct from any before described. Though almost every country of the globe appears to have possessed one or more indigenous species of the ox, yet it is difficult, or we might say impossible, to name the natural locality of the domestic race, or to say where its domestication was first effected. But, as observed by Martin, whatever may have been its native country, "this most valuable animal has spread with the spreading of nations; it is universal over Europe and Asia, except within those icy regions where the rein-deer supplies its place; its range extends over the whole of Africa and the great island of Madagascar; and within modern days it has been introduced from Europe into the vast continent of America, and the islands of the southern ocean. In these new regions it has multiplied excessively, and herds roam the plains in a state of semi-wildness. South America owes the ox to the Spaniards; the earliest imported, according to Azara, were Andalusian. Captain John de Salazar, born in the city of Pomar, in Arragon, carried over seven cows and a bull to the coast of Brazil, whence they were transported by the rivers Paranay and Paraguay to the city of Assumption, in 1546, several months being occupied in their transport. From this stock sprung the feral cattle of the extensive Pampas, of which so many travellers have given most interesting descriptions."

Naturalists are agreed, however, that notwithstanding the great diversity presented by the domestic ox, and the various breeds into which it has ramified, from the effects of treatment, food and climate, it is every where specifically identical. Still the peculiar characters of the different breeds, are in many instances quite striking, and show that a long period of time has elapsed since they were subjected to the influences of domestication.

In noticing, as we propose to do, the various breeds of cattle, it is proper to begin with those which seem to have made the least departure from the primitive type.

In Italy a fine race of semi-wild cattle exists in the Campagna of Rome, (fig. 28.) Martin observes that many of the bulls are "models of beauty; such, indeed as the sculptured figures of antiquity portray with spirit and fidelity." They are described as mostly white, or grey tinged with brown; the horns large, well turned and pointed. The bulls, which are very fierce, are employed in the bull-fights of the amphitheatre of Rome—the noble animals keing kept, says Martin, "in the vaults which once held the ashes of the Imperial Cæsars !"

28—BULL OF THE CAMPAGNA OF ROME.

It is this breed to which Mr. D. G. Mitchell, under the signature of "Caius," alludes, in *The Cultivator* for 1847, p. 46. He says: "The oxen are large, deep-chested, well-formed, light-grey beasts, with enormous horns, spreading from 3 to 4 feet; and are said to have sprung from that famous breed of white cattle, which history and romance alike assign to the beautiful valley of Clitumnus. They have not the square, butcher make of the Herefords and Durhams; but taking into view their soft, fine haired skins, their large, intelligent eyes and their branching horns, I have never seen handsomer cattle in any part of Europe."

It has been conjectured, and the idea is not improbable, that some of the present breeds of Great Britain, including the semi-wild stocks of Chillingham and Chatelherault parks, were derived from this ancient Italian race, which in remote times is believed to have extended over a large portion of Europe and parts of Asia, and may have been carried to the British islands by some of the early inhabitants, of whose history we have no knowledge.

The cattle of Tuscany appear to have considerable affinity with this Roman breed. They are spoken of by travelers as of fine shape and appearance. And in Hungary there is a breed of white or whitish cattle, of large size and with long horns, which may be identical with that of the Campagna. It appears to be a breed of superior character. Mr. Fleischmann, in his remarks on the agriculture of several European countries, (Report of the Commissioner of Patents, 1847, p. 344,) observes: "Among all the horned races of Europe, there is none which, with an equally collossal frame approach so nearly the speed of the horse, as do the Hungarian oxen. It is a race, which by their high and stately growth, their long horns, nearly six feet in length, their proud and bold look, their broad breast and handsome white color, changing slightly into blue, and lastly, the beautiful proportions of all their parts, may fairly be pronounced one of the most useful and handsomest productions of generating nature."

In our next, we shall commence notices of the British breeds, and shall speak of those that have been introduced to this country.

The Veterinary Department.

Diseases of Horses.

Ringbone.—Ringbone usually commences about the pastern-joint; but as it spreads rapidly it soon involves not only the pastern-bones, but the cartilages of the foot. According to Youatt, when the first deposit is on the lower pastern, and on both sides of it, and produced by violent inflammation of the ligaments of the joints, it is recognised by a slight enlargement, or bony tumor on each side of the foot, and just above the coronet. This is more frequent in the hind than in the fore foot, because, from the violent action of the hind legs in propelling the horse forward, the pasterns are more subject to ligamentary injury behind than before; yet the lameness is not so great, because the disease is confined principally to the ligaments, and the bones have not been injured by the concussion; while from the position of the fore limbs, and their exposure to concussion, there will generally be in them injury of the bones to be added to that of the ligaments. In its early stage, and when recognized only by a bony enlargement on both sides of the pastern-joint, or in some few cases on the one side only, the lameness is not very considerable, and it is not impossible to remove the disease by active blistering, or by the application of the cautery; but there is so much wear and tear in this part of the animal, that the inflammation and the disposition to the formation of bone rapidly spread. The pasterns first become connected together by bone instead of ligament, and thence results what is called an anchylosed or fixed joint. Its motion is lost. From this joint the disease proceeds to the cartilages of the foot, and to the union between the lower pastern and the coffin and navicular bones; and the motion of these parts is likewise impeded or lost, and the whole of this part of the foot becomes one mass of spongy bone. From this disposition to spread, and at first around the pastern-joint, which is situated just above the coronet, the disease has acquired the name of ringbone.

Wind-Galls.—Horses which are subjected to hard service are liable to have what are called wind-galls, on those parts of the limbs which are most exposed, especially about the hock and upper pastern-joints. The affection is an undue enlargement of little bags or sacs which are situated in the parts named. By the straining of the tendons, these sacs become injured, and sometimes take on inflammation, and become hard. Youatt says—"The farriers used to suppose that they contained wind—hence their name wind-galls; and hence the practice of opening them by which dreadful inflammation has often been produced and many a valuable horse destroyed." As to treatment, the author just referred to directs, "if the tumors are numerous and large, and seem to impede the motion of the limb, they may be attacked first by bandage. The roller should be of flannel, and soft pads on each side of the enlargements, and bound down tightly upon them. The bandage may be wetted with a lotion composed of 3 parts of vinegar to one of spirits of wine. The wind-gall will often diminish or disappear by this treatment, but will too frequently return when the horse is again hardly worked. A blister is a more effectual remedy, and firing still more certain, if the tumors be sufficiently large and annoying to justify our having recourse to measures so severe. In bad cases, the cautery is the only cure, for it will not only effect the immediate absorption of the fluid, and the reduction of the swelling; but, by contracting the skin, will act as a permanent bandage, and therefore prevent the re-appearance of the tumor."

Domestic Economy, Recipes, &c.

[From Miss Beecher's Domestic Receipt Book.]

Roasted and Baked Meats.

General Remarks.—Be sure you have your spit and tin oven very clean and bright, and for this end wash them, if possible, before they get cold. If they stand, pour boiling water on to them.

Have a fire so large as to extend half a foot beyond the roaster each side.

When meat is thin and tender, have a small, brisk fire. When your meat is large, and requires long roasting, have large solid wood, kindled with charcoal and small sticks. Set the meat, at first, some distance from the place where it is to roast, so as to have it heat through gradually, and then move it up to roast.

Slow roasting, especially at first, and still more for large pieces, is very important.

Allow about *fifteen minutes* for each pound of most kinds of meat, and if it is cold weather, or the meat fresh killed, more time is required, probably twenty minutes for each pound.

When the meat is nearly done, stir up the fire to brown it. The meat should be basted a good deal, especially the first part of the time.

Let meat be spitted so as to be equally balanced. When the meat is nearly done, the steam from it will be drawn toward the fire.

A pale brown is the proper color for a roast.

Some dredge on flour and baste, a short time before roasted meats are done.

Whenever fresh lard is used instead of butter, in the dripping pan, or to rub on meats, more salt must be used.

Flour thickening in gravies must be wet up with very little water till the lumps are out, and then made thin. Never dredge flour into gravies, as it makes lumps. Strain all gravies.

Roast Beef.—The sirloin, and the first and second cuts of the rack, are the best roasting pieces.

Rub it with salt; set the bony side to the fire to heat a while, then turn it and have a strong fire; and if thick, allow fifteen minutes to the pound; if thin, allow a little less. If fresh killed, or if it is very cold, allow a little more. Half an hour before it is done, pour off the gravy, thicken it with brown flour, and season it with salt and pepper. It is the fashion to serve roast beef with no other gravy than the juice of the meat.

To Roast a Spare Rib.—Rub with salt, pepper, and powdered sage. Put the bone side to warm slowly. Dredge on a little flour, and put a little salted water and butter into the dripping-pan, and baste with it. If large, it requires three hours; if small, only one to cook it. Pork must be cooked slowly and very thoroughly.

Roast Turkey.—Wash the outside and inside very clean. Take bread crumbs, grated or chopped, about enough to fill the turkey, chop a bit of salt pork, the size of a good egg, and mix it in, with butter, the size of an egg, pepper, salt, and sweet herbs to your taste. Then beat up an egg and work in. Fill the crop and the body, sew them up, and tie the legs and wings, and spit them. Set it where it will gradually heat, and turn it once or twice, while heating, for fifteen minutes. Then put it up to the fire, and allow about twenty-five minutes for each pound. Turkey must be cooked very thoroughly. It must roast slowly at first, and be often basted with butter on a fork. Dredge it with flour just before taking it up, and let it brown.

Put the inwards in a skillet to boil for two hours, chop them up, season them, use the liquor they are boiled in, for gravy, and thicken it with brown flour, and a bit of butter, the size of a hen's egg. This is the giblet sauce. Take the drippings, say half a pint, thickened with a paste made of a tablespoonful of brown or white flour, and let it simmer five minutes, and then use it for thin gravy.

The Farmer's Note-Book.

Hints as to Wintering Stock.

Eds. Cultivator—The season of the year has now arrived, when all our stock, must depend wholly upon our care and feeding. Have you got more than you can winter well? If so, sell off until you are sure that you have no more than you can winter, so as to have them in good condition in the spring.

All young animals should be kept steadily growing, winter and summer, from the time they are dropped, until they have grown to full size, and all their qualities are properly developed; not stuffed or pampered at any time, so as to cause an unnatural growth; but let it be uniform and continuous. All animals, whether old or young, should be kept in uniform good condition the year round. If they are suffered to run down during the winter, and come out poor in the spring, it takes some two months, say from the middle of April till the middle of June, to bring them up to the condition they were in the previous fall; and frequently their constitution becomes so impaired that they never get fairly over. This rule holds good with reference to all kinds of stock, whatever may be the uses for which they are kept, or intended. There is no rule which accords better with good economy, and natural principles, than that we should keep no more stock than we can keep well. This will prove profitable to the farmer, and comfortable to his stock. Farmer. *Columbia, N. Y.*

Profits of Farming.

Eds. Cultivator—Nothing in your paper which I have read, during the past three years, for which I have been a subscriber, has interested me more, than your descriptions of farms in this and other States; and the statements made by farmers themselves, of their own experiments, profits and expenses in the different branches of their business.

And I think it would be profitable, as well as interesting, to most of your readers, if some of the real, practical and working farmers would keep correct accounts of their business, and make and publish statements in *The Cultivator* of their incomes and expenses in the various localities, and in all the different branches of husbandry. Such statements should contain the amount of capital invested, the proximity and facility to market, and particular branch carried on. By comprising these statements, we might make some estimate of the relative value of farms at different places, and also, of the various degrees of profitableness of the various branches and modes of management.

My farm is situated in the town of Sidney, Delaware county, N. Y., and contains about eighty acres, sixty of which are improved, or beginning to be improved. A section of it, divided from the rest by a small creek, is a low flat, and has been mowed some thirty or forty years in succession. This piece contains about eighteen acres. Another piece of twenty acres is nearly level, and suitable to plow, though somewhat stony. I have a few acres of pasture that never was plowed, being rather wet, and some side hill too steep to till conveniently. I mowed the past season eighteen acres; about six acres were under the plow, and the remainder was in pasture.

I bought my farm in 1845, for $1,300, and this is the second season I have occupied it myself. A part of my pasture produces but little, on account of the briars with which it was overrun, when I purchased, and which I have been unable to subdue yet. My principal business is making butter. I kept the past season, five four year old heifers, and seven cows—twelve in all. I also kept one horse, fifteen sheep, and a yearling bull. I live one hundred miles from Catskill, the nearest market or shipping place. I sold my butter and pork at my own house.

Sold at my own house, 2,000 lbs. butter, at 16¼ cts. per lb,		$325 00
do. Pork, 1,000 lbs. at 4½ cts.,		45 00
do. 50 bushels oats, at 31¼ cts. per bush.,		15 62
do. 30 " corn, at 50 " ",		15 00
Calf skins,		5 00
A calf,		3 00
A yearling,		6 00
7 tons hay, at $6 per ton,		42 00
Wool, poultry, eggs, tallow, hides, &c., &c., to the amount of,		50 56
Sold,		$507 18
Merchants', grocers' and mechanics' bills amount to,	$91 07	
Paid help in the house,	23 00	
" on the farm,	25 00	
Expenses,		$139 07
Profits,		$368 11

In the foregoing account I estimated only the produce I actually sold, making no reckoning of what was consumed in the family, consisting of four persons. My stock now is about the same as at the beginning of the year. From my seven cows and five heifers, I sold two thousand pounds of butter, besides what my family used in one year, which is not far from three hundred pounds; making in the whole, 2,300 hundred pounds. If my cows had been all of mature age, they would have averaged 200 lbs a piece. My feed in the summer is common pasture—in the winter it is good hay, with roots or provender of some sort, just before and after calving. My cows are all of the common or native breed, and generally small size. Sluman L. Wattles. *Sidney Centre, Del. Co., N. Y. Dec.* 26, 1848.

Maple Sugar, Indian Corn, &c.

Eds. Cultivator—I propose to offer a few remarks and suggestions, on various subjects connected with the object of *The Cultivator*, and should they prove of service to any of your numerous readers, it will be a sufficient compensation for the labor of preparing them.

Sinking Rocks—Many farms are encumbered to some extent with rocks of various sizes, sprinkled about and causing great inconvenience to the plowman. Blasting is frequently resorted to for their removal. Some rocks, however, are so hard as almost to bid defiance to the drill; and besides, this method is attended with some expense, and not wholly without danger. Having been in the practice, for many long years, of encountering these obstacles, I resolved to dispose of them by the sinking mode—that is, to dig a pit by and partly under the rock, sufficiently deep and broad, so that when tumbled in, the plow can freely pass over it.

I disposed of quite a lot of these incumbrances, with the aid of another hand, in a single day, thus "enlarging the area," without "extending" it, and subsoiling, in one instance, to near the depth of seven feet.

Maple Sugar—I do not intend here, to speak of the best way of producing this article in its purity. That has often been done through your columns by those better qualified than myself. The object is to induce those having the *means*, to *make* it. Many farmers, having abundance of the sugar maple, object to engaging in this business, alleging that the sale of the fuel necessary for its manufacture, would purchase an equal amount of sugar, ready made. I am quite certain that my own experience, for a series of years, has resulted in a different conclusion. Take the last season for an example. About 40 barrels of sap were boiled, consuming nearly three cords of refuse wood, chiefly bass and hemlock, and producing about 80 pounds of sugar and 16 gallons of molasses. Estimating the sugar at ten cents a pound, and the molasses at 50 cents a gallon, and the sales were all made at a higher rate, the amount is $16. The wood used could hardly have been sold for three dollars. My apparatus for boiling is not the most economical, being a cauldron set in brick, in connexion with a five pail kettle, with a spiral flue around the whole. A large sheet-iron pan is said to be far preferable, by exposing a much larger surface to the fire, by which the evaporating process is greatly expedited. A small building, contiguous to my dwelling, contains my boiling apparatus, and sufficient space for nearly two years' supply of fuel, consisting of old rails, stumps, and parts of logs too knotty or tough to be reduced for the stove, all gathered in the previous season so that when sugar time comes, half the fire may not be required to fry away the sap *outside* the kettles. A one horse power is used for gathering, and when the "run" is over, the buckets, &c. are carefully stowed away in an upper loft, ready for the "bush" again on return of spring. It has been recommended to plug the trees, to facilitate the healing process. I have tried it one or two years, and the effect was evidently bad, and long since abandoned it. But not to protract these remarks; let those who have not yet drawn any portion of their sugar from the maple, be assured that this home-made luxury is not less *sweet*, albeit there may be less *sweat* in the manufacture of it, than in the more common product of the cane.

Quantity of seed per Acre—The proper seeding of land is worthy the careful observation of every farmer. To ascertain the amount of seed in any given case, best adapted to produce the greatest yield, is necessary to successful cultivation. Such, however, is the diversity of soil, fertility and climate, together with various other circumstances, that no rule, universally applicable, can be laid down. Perhaps in regard to this subject, as well as many others, it may be said that "truth lies between extremes." "Sowing sparingly has been condemned by high authority, and its practice is doubtless far more pernicious than its opposite. Suppose a certain field is designed for oats the ensuing year—let a part be seeded at the rate of 2 and another part at the rate of 2½, a third part at the rate of 3 bushels per acre; the result would most likely indicate the proper quantity of seed per acre for that locality. For the above crop, I have usually sown 3 bushels per acre, a less quantity not appearing to fully occupy the ground.

Planting Corn—With respect to corn, I have generally planted in rows both ways, at a distance of about 3 feet. Last year the rows were 3 by 2½, and the present year at least 3 by 4 feet; the land and cultivation about the same in both years, and the seasons favorable. In the first instance, the yield was less than in the last, taking any given number of hills, but much greater in the aggregate, both in grain and fodder. The first contained about 5,136 hills; the latter, 3,627 per acre. The land was capable of sustaining the largest number and the trifling additional labor of tillage when the ground is fully occupied, is not to be compared with the greater yield. But the greater value of the crop, generally obtained in consequence of thorough seeding, is not the only beneficial result. Noxious weeds, to a great extent, are prevented from taking root and maturing their pernicious seeds, which in some fields appear to have already won the victory over the less spontaneous but more legitimate and valuable products of agriculture.

Pasturing Highways—The practice of some farmers, of pasturing the highway, has several times been alluded to, and condemned by your correspondents, as well it should be. It is a bad business all round—for the owners, usually a profitless one, as the time spent in search of the animals is hardly to be compensated by all the pickings and stealings obtained abroad. And to those frequently harrassed by these unwelcome visitors, it is truly vexatious—an infliction which no man ought to inflict upon his neighbor. It has been, and perhaps still is, supposed by some persons, that certain animals are "free commoners," as they express it, and from indications not to be mistaken, the *animals themselves* apopt this belief to an unlimited extent. Now, Messrs. Editors, I wish to make a suggestion, and will then close these remarks. It is this—that at the ensuing town meetings, the presiding officer be requested to state briefly the law on this subject, as there is evidently some lack of information in the community in regard to this matter. G. Butler. *Clinton, N. Y., Dec.* 20.

Substitute for the Potato.

Eds. Cultivator—As the potato disease is very severe, causing the complete failure of the crop on many farms in this neighborhood, I wish to call your attento an article I take from the New-York *Sun* of Nov. 4, 1848.

"*Rival of the Potato.* M. Piquot Lamarre has been sent out to the United States, in order to collect specimens of the newly discovered vegetable, a species of Picotiana, for the purpose of introducing it into France. It is considered superior to the potato, being more delicate, and at the same time, more nutritious."

I have seen no account of such a vegetable in your paper. Will you explain to your readers the character and quality of said vegetable, and in what part of the United States it may be found? C. Huntington.

We know nothing of the vegetable alluded to, but insert the communication of Mr. H., for the purpose of bringing out further information on the subject.—Eds.

Large Crop of Wheat.

The last summer we harvested 240 bushels of wheat on 5¾ acres, weighing 62½ lbs to the measured bushel. The land upon which the wheat was raised, had been in pasture some six years, previous to March, 1847, at which time it was plowed, and sowed with oats. The oats were harvested in July following, and were only a tolerable crop. The oat-stubble was almost immediately plowed under about seven inches deep, a dressing of well rotted manure and ashes, (mixed) was then put on, after which it was again plowed about six inches deep, with two horses, so that the stubble was left in a great measure undisturbed by the second plowing, (although it was so much rotted as not to be much in the way.) The second plowing, about the 24th of September, was followed by the subsoil plow, drawn by two horses, loosening the ground under the stubble to the depth of five or six inches. The ground was harrowed once before the wheat was sowed and twice after. On the 5¾ acres, about sixteen bushels of wheat were sowed. The variety was procured from Mr. John

Hunter, of Lycoming Co., Pa., and is there known by the name of the *White Blue Stem*. It is a white, smooth wheat

It may not be amiss to remark that a portion of the 5¾ acres, was before this treatment, an unproductive, clay hill side, much washed and gullied, and in fact the whole field was very uneven and hilly; but the earth being loosened to so great a depth by the subsoil plow, all the water that fell on it was retained, so that it did not wash, and notwithstanding the heavy rains of last winter, the face of the ground was completely unbroken. Jas. L. Cox. *Zanesville, O.*

Commerce of the New-York Canals.

The following valuable tables in regard to the amount and value of produce received at tide-water through the New-York canals, during the years 1846, 1847 and 1848, were prepared for the *Albany Evening Journal*, from the official reports of the collector's offices at Albany, West Troy and Waterford. The information embraced is of a kind which renders the tables worthy of preservation for future reference.

Statement showing the total quantity of each article which came to the Hudson River on the New-York Canals, during the years 1846, 1847, and 1848:—

The Forest.	1846.	1847.	1848.
Fur and peltry,........lbs.	817,150	566,000	557,271
Product of Wood.			
Boards and scantling, .feet.	260,335,271	299,078,633	262,279,116
Shingles, ...M,	69,822	101,527	104,270
Timber,........cubic feet,	1,798,198	1,613,943	2,098,777
Staves,...............bbls.	106,152,500	95,104,060	113,656,951
Wood, ...cords.	11,832	12,331	13,961
Ashes,...............bbls.	46,812	37,538	38,229
Agriculture.			
Product of Animals			
Pork,..................bbls.	80,093	76,179	87,930
Beef,.... .... "	34,600	71,266	60,570
Bacon,................lbs.	4,000,500	4,902,000	8,183,285
Cheese, ... "	35,560,118	40,844,000	43,278,526
Butter,................ "	21,477,657	22,721,000	23,729,997
Lard, ... "	6,721,000	4,348,000	9,925,666
Wool,................ "	8,866,376	12,044,000	8,529,331
Hides, ... "	310,900	172,000	174,935
Vegetable Food.			
Flour,...............bbls.	3,063,441	3,952,972	3,131,095
Wheat,.............bush.	2,950,636	4,143,830	3,116,134
Rye,........... .... "	321,799	295,119	286,919
Corn,............... "	1,610,149	6,053,845	2,953,963
Barley, ... "	1,427,953	1,523,020	1,548,197
Other grain,......... "	1,920,800	2,040,052	2,077,724
Shiff stuffs,.......... "	1,468,232	2,091,681	1,437,487
Peas and beans,..... "	96,800	106,088	75,808
Potatoes,............ "	230,939	108,369	115,629
Dried fruits,.........bbls.	1,502,900	3,558,000	1,828,145
Other Agricultural product.			
Cotton,.................lbs.	445,100	474,000	174,700
Tobacco,............. "	2,609,100	1,228,000	350,935
Grass seed, ... "	1,094,400	3,308,000	1,667,030
Flax seed,............ "	5,283,700	4,128,000	1,763,393
Hops,................. "	1,690,500	1,948,000	1,597,342
Manufactures.			
Domestic spirits, ...gals.	1,126,549	1,693,076	1,606,131
Leather, ...lbs.	5,160,654	5,168,000	4,538,951
Furniture, ... "	2,226,114	1,972,000	1,535,365
Bar and Pig lead, ... "	489,800	482,000	86,100
Bloom and Bar iron,.... "	10,892,243	26,348,000	29,787,506
Pig iron,............... "	10,574,740	21,608,000	11,528,683
Iron ware, ... "	1,219,091	2,014,000	2,314.064
Domestic woolens,..... "	1,425,340	1,756,000	1,103,564
Domestic cottons,...... "	2,324,774	2,396,090	2,493,561
Salt.................bush.	692,442	382,390	343,618
Other Articles.			
Stone, lime, &c.,......lbs.	44,200,033	59,094,000	65,246,668
Gypsum,.............. "	12,084,100	8,518,000	3,715,980
Mineral coal,.......... "	18,846,660	32,580,000	48,891,417
Sundries, ... "	90,841,614	147,988,000	97,796,439

Statement showing the aggregate value of the property which came to the Hudson River on all the Canals, during the years 1846, 1847, and 1848, under the divisions as specified in the above table:—

	1846.	1847.	1848.
The Forest,..................	$8,589,291	$8,798,373	$6,994,469
Agriculture..................	33,662,818	54,624,849	37,336,390
Manufactures,...............	4,805,799	6,024,518	3,834,360
Merchandize,................	276,872	517,594	593,619
Other articles,.............	3,770,476	3,127,080	2,210,623
Total,.................	$51,105,256	$73,092,414	$50,969,461

The Cultivation of the Potato.

Eds. Cultivator—My own experiments of eight years, with the potato, have very much encouraged me to continue the alternate culture of seed and its seedlings, with careful selections.

The process does materially improve the potatoe in *new* and *excellent varieties*—in health and productiveness. At the same time, much depends for success, upon a proper situation and preparation of soil, manner of cultivation, time of planting, lifting and good storage.

Good upland soil, deep thorough plowing, early planting—with well cultivated approved seedling varieties, in shallow drills, early weeding, light hilling, early lifting, and dry airy storage, does more for the redemption of the potato from disease, than all the nostrums the world can devise.

Potato seed, though it produces generally several different varieties in its seedlings, will not be likely to produce varieties or qualities, with which it has no connexion. If new and choice varieties be expected from sowing the seed, care should be taken to obtain seed from good varieties, or in the immediate neighborhood of the same.

Seed from the balls, will transmit from a diseased stock, in some degree, that disease to its seedlings—to some varieties more than others.

Some have gathered balls from any where, without regard to the character of the stock, planted the seed, and finding in the seedlings disease and inferior specimens, abandoned at once the experiment, and in their judgment, seedling potatoes are no better than old ones.

The same laws that govern the apple, peach and strawberry, in their culture for new and choice varieties, govern also, the potato. If a a new choice seedling apple, pear, or strawberry be desirable, why not a new and excellent potato? But neither is to be obtained without the use of their seed, and may be, not without a series of experiments, with careful selections.

Potato seed, from properly selected, well cultivated seedlings, combining through the seed the best varieties at home and from abroad, is among the most valuable seeds to be found in market.

Potato seed may be sown like the tomato, early in hot bed for an early crop; or like cabbage, in a rich bed in a warm place, and transplanted; or with a seed planter in the fields, with great profit; or broadcast, on rich fine soil, and lightly harrowed in, with no other cultivation, and the crop of young seedlings, the very best, for planting the next season.

Early sowing the seed and early lifting, gives the potato a tendency to early ripening. Lifting the potato before it has perfected its growth, it is found dryer in cooking, will keep better through the winter, vegetate earlier in the spring, and become more hardy in its constitution.

Medium sized potatoes cook better, of finer quality and flavor, will plant more ground by the bushel, and are more exempt from disease.

Nipping off the weeds, just below their roots, soon as their appearance, is a better remedy for the potato disease than *nipping the vines*.

My crop of the last season, combining all my best varieties through the seed from home and abroad, is good —Exempt from the prevalent disease, productive, and developing, from the seeds obtained not long since from different parts of the world, viz. Prussia, England, South America, Mackinaw, and other places, varieties promising a valuable acquisition to the potato market The crop of about 1400 bushels, shows distinctly in its healthy and strong foliage, loaded with balls, its strongly marked and distinct varieties, and the increase of new varieties of fine appearance, the benefits of the progressive alternate culture. N. S. Smith. *Buffalo, Jan.* 4, 1849.

Communications from David Thomas.

I. Machine for cutting Sausage meat.—Last summer, a kind friend near Philadelphia, sent us a sausage machine, and a few days ago we tried it, highly gratified with its performance. Fourteen pounds of meat were run through it in a few minutes, cut fine enough. Knowing, however, that when chopped by hand, frozen meat always works easiest,—care had been taken to have another batch of 52 pounds reduced to that condition; but it went badly, and we had to thaw it before we could proceed with any satisfaction. It then passed through with great facility. I believe the whole sixty-six pounds might have been done in but little more than half an hour.

Every substantial farmer ought to have one of these machines; but great care will be necessary to keep the knives sharp, by excluding bones, &c., and to cleanse it, and dry it thoroughly when the work is done. For these reasons, the propriety of lending one round the neighborhood, may be very questionable.

II. Snow balls on Horses' feet.—Lately traveling in a cutter, the horse's feet collected balls of snow which annoyed and fatigued him excessively. He could not touch the ground by two or three inches; and his labor, probably increased three-fold,—was so great, that after ascending a long slope, he stopped of his own accord, nearly exhausted. On our return, I had his hoofs cleared out, and *soft soap* well rubbed in. The consequence was that no more balls collected, and he came home in fine spirits.

On a journey, to soap the hoofs *twice* a day may be best in some cases, but *once* a day in ordinary times, would be a great relief.

III. Soap-stone Griddles.—Understanding that cakes on a soap-stone griddle required no fat to keep them from sticking,—I brought home one a few days ago, and we prepared to try the experiment. The look of incredulity in the chief cook at that moment, was amusing; but it was soon turned into one of triumph, for the cakes were turned and taken off as easily as they would have been from the best greased "bake-iron;" and without any fume from burning fat, as in common cases. Besides, the cakes were all nicely browned, and not one burned in the slightest degree. It is true, soap-stone may be heated red hot, but then the plate is so thick, and heats so slowly, that all danger of burning is easily prevented. In short, we are highly pleased with the purchase, and deem it a great acquisition.

It will be important to keep these griddles very clean, and for this purpose, they may be rubbed occasionally with pumice stone. *Greatfield, Cayuga Co.*, 1 *mo.*10.

Benefits of Agricultural Societies.

We have often remarked that the great benefit of agricultural associations, is the opportunity they afford for bringing together the people, with their animals, articles and products, by which all may be compared and the particular improvements possessed by each may be seen and adopted. Mr. Fletcher, in his address before the Windsor (Vt.) Agricultural Society, in speaking of their exhibitions says:—"It is very desirable that every improvement in husbandry, and the most successful systems of agriculture, which are known to but a *few* comparatively, should be generally known and universally adopted. Here, the best agricultural products are exhibited, as an example and incitement. Here, we have an opportunity of viewing and comparing, the best of our flocks, and herds, of different breeds, to ascertain their *relative* value; and here, are exhibited, the most improved, the best specimens of agricultural implements. There, we see the rapid improvements in the mechanic arts, the handmaid of agriculture. Here, we may see the difference between the limb of a tree for a plow beam, with a knot to it for a coulter and share, and the fine plow of the present day. Here, we may learn from the modern implements how to save time and strength, and accomplish a greater amount of work. Here, the farmers of the county assemble once a year; become acquainted, promote kindly feelings; converse freely with each other, on those subjects most interesting to them. What can be better calculated to teach us to do well?"

Grazing in Michigan.

As the opinion has been prevalent among travelers at the west, that the plains and openings in Michigan, although so valuable for the production of wheat, and other grain crops, were not adapted to grazing, I have thought that it might not be uninteresting to some of your readers, to make a brief statement of facts in regard to that matter.

Shortly after I commenced improving my farm, about ten years since, being in need of meadow, I stocked down two pieces of land, one containing ten acres which had been plowed three years, and another six acres, which had been plowed two years. The ten acres yielded about two tons of hay per acre, and the six not more than one ton. The land being exactly alike, and the seed having been sown at the same time, and having appeared at the commencement equally promising, I sought to examine into the cause. When a thought suggested itself to me that it was owing to the land not having been cultivated a sufficient length of time, to have become mouldered down to that state that is necessary to the growth of grass. I therefore, deferred the business of stocking down, until I had tilled my land two or three years longer.

I then manured and fenced off one acre, and sowed with clover and herdsgrass (timothy) near my barn, for the purpose of soiling; which I used four years to a very great profit. Then, after having reduced the lot to one hundred square rods by taking off sixty rods for other purposes. I commenced pasturing in March last, and pastured the following amount of stock, viz: From the last of March to the 10th of November, 4 rams, 3 years old—1st of June to 10th Nov. 6 ram lambs, 5 months old—in May, turned on 2 cows, 10 days—in July, one yoke oxen, 10 days—from May till August, 3 calves.—The rams and lambs were kept constantly on the above named 100 square rods of land during the whole season, without having been fed any thing, except a little salt occasionally, the sheep were all fat with one or two exceptions. I have taken note of this, more particularly, because I have never heard of more than seven sheep being kept on an acre during the season.

Ours is what is denominated burr-oak and hickory soil, and is composed of a black loam and gravel, and is highly impregnated with lime. The clover, in our vicinity the past season, was equal to any that I have ever seen, without the aid of manure or plaster.

Plaster has been introduced to the lighter soils of our state, and works well. J. Gardner. *Albion, Mich.*

Orange Co. (Vt.) Ag. Society.

Our County Society held their fair at this place, (Chelsea,) on the 27th day of September last, and a splendid fair we had. We had a fine display of stock, a good number of stallion horses, very fine matched and single horses, a good number of fine sheep, a large number of cows, heifers and bulls, and then, to cap the whole, working oxen in great abundance. From Washington, there was twenty-two fine pair, in one team, and from Tunbridge, sixty-eight pair, fine red oxen, which drew a vehicle forty-five to fifty feet long, in which was a band of music. This team was led by a fine Durham bull in harness. Each pair of oxen carried a red flag, and each driver was dressed in a white frock with a belt- The whole made an imposing display. The show of manufactures and household articles was very fine. CALVIN BLODGETT. *Jan.* 1849.

Agricultural Papers.

Every farmer, however small his farm, can well afford to take a good agricultural paper, to assist him in the erection of suitable buildings and fences; the making and saving manure; the selection of proper agricultural implements; the best kinds of stock and fruit; the feeding and fattening of cattle; the management of his land and crops; thus obtaining the united wisdom and experience of science and the best practical farmers, not only of our own country, but of the civilized world. I have known farmers to lay out, through misdirected efforts, within the short period of a year or two, enough to pay for *one hundred* copies of any agricultural paper printed in the land. R. BEDFORD. *Barre, Vt.*

New-York State Agricultural Society.

Annual Meeting.

The Society met at the Assembly Chamber, in the Capitol, on the 17th ult. The President, LEWIS F. ALLEN, Esq., in the chair. After receiving the subscriptions of the members, the Secretary, B. P. JOHNSON, Esq., read his annual Report, detailing the operations of the Society for the past year, from which it appears that the operations and influence of the Society have been gradually increasing, with a most beneficial effect upon the interests of the farming community.

Mr. MCINTYRE, the Treasurer, read his annual Report, from which we learn that the receipts and disbursements, were as follows:

Receipts.—	Balance from last year,	$806 56
	From individual members,	82 00
	From State treasury,	700 00
	Interest on funds invested,	560 00
	Loan called in,	1,000 00
	Receipts at annual exhibition,	6,272 80
	Sundry other sources,	40 25
	Borrowed,	750 00
		$10,211 61
Disbursements.—	For Premiums,	$4.278 42
	For salaries,	1,015 73
	On account of Library,	316 15
	Expenses at Buffalo Show,	1,072 86
	Purchase of Tent,	250 00
	Invested,	2,000 00
	Postage,	99 28
	Printing,	260 16
	Incidental expenses,	295 42
	Sundry expenses,	225 04
	Cash on hand,	398 55
		$10,211 25

The usual nominating committee having been appointed, the Society adjourned to 4 o'clock, P. M.

Four o'clock, P. M.—The report of the nominating committee was read. They recommended that the next State Fair be held at Syracuse, and the following gentlemen for officers of the Society, who were then elected:

JOHN A. KING, of Queens, President.

VICE PRESIDENTS.

1. JAMES MONROE, of New York.
2. SAXTON SMITH, of Putnam.
3. EZRA P. PRENTICE, of Albany.
4. LEROY MOWRY, of Washington.
5. WILLIAM FULLER, of Onondaga.
6. DAVID MAINE, of Madison.
7. JOHN DELAFIELD, of Seneca.
8. HENRY W. ROGERS, of Erie.

BENJ. P. JOHNSON, of Oneida, Cor. Secretary.
JOHN McD. MCINTYRE, Albany, Rec. Secretary.
LUTHER TUCKER. of Albany. Treasurer.

J. B. Burnett and P. N. Rust. of Onondaga; Henry Wager, of Oneida; J. J. Viele of Rensselaer, and Samuel Cheever, of Saratoga, additional members of the Executive Committee.

Seven o'clock, P. M—The Society convened to hear a Lecture by Prof. EMMONS, on the connection of Science and Agriculture, after which a variety of other business was transacted.

Thursday—The Society convened at 10 o'clock, at its rooms in the old State Hall, when the Reports of the Judges were read, and the following premiums were awarded:

On Farms—1. H. T. E. Foster, Lakeland, Seneca Co., Silver cup, value, $50—2. E. C. Bliss, Westfield, Chautauque Co., do. $30—[Mr. P. Crispell, Jr., of Ulster Co., would have been entitled to the second premium, had not the same premium been awarded to him last year. A certificate to this effect, with a set of the Transactions, was awarded to Mr. C.]—3. To. McCulloch and Kirtland, Greenbush, Rensselaer Co., $20.—4. John Carpenter, Wales, Erie Co., set of Transactions. The committee specially commend a Farm Account Book, presented by Benj. Enos, of De Ruyter, Madison Co.

Experiments—To W. D. Osborne, Port Byron, Cayuga, to test the value of manures, by a three years' rotation.

To Daniel S. Curtis, of Canaan, Columbia Co., $50 for the best statement in regard to the production and preparation of fine wool for market.

Winter Wheat.—1. To Amos Miller, Vernon Centre, 44 bu. per acre, $20—2. To Ira Apthorp, Riga, 43 bu. 36 lbs., $15—3. Benj. Enos, De Ruyter, 43 bu., $5.

Indian Corn—1. Peter Crispell, Jr., Ulster Co., 90 bu. 5 lbs. per acre, $20—2. Benj. Enos, De Ruyter, 89 bu. 14 lbs., $15—3. Levi T. Marshall, Vernon Centre, 86 bu. 38 lbs., $5. Wm. Wright, Vernon, presented a statement showing a product of 116 bu. 36 lbs. for one acre; but as the rules required two acres, it was excluded from competition.

Barley.—1. Melos Adams, Martinsburgh, 62½ bu. per acre, $15—2. E. M. Bradley, East Bloomfield, 60 bu. 9 lbs., $10—3. Benj. Enos, 54 bu. 25 lbs., $5.

Oats.—E. M. Bradley, 89½ bu. per acre, $15—2. Daniel Jemson, Galen, 87½ bu., $10—3. Benj. Enos, 86½ bu. $5.

Beans—E. C. Bliss, Westfield, 33½ bu. per acre, $10—2. B. Enos, 28 bu. 23 lbs. per acre.

Potatoes.—For quality—1. To S. H. Church, Vernon, 269½ bu. per acre, $15—2. To Wm. Newcomb, Rensselaer Co., $10.

Mangel Wurtzel.—1. John Row, Riga, 1,489 bu. of 50 lbs. per acre, $8.

Carrots.—1. Wm. Risley, Fredonia, 1,081 bu. per acre, $8.

Ruta Baga.—Joseph Hastings, Rensselaer Co., 14,00 bu. per acre, $10.

Timothy Seed.—E. C. Bliss, 7 bu. 24 qts. on one acre and eight rods, $5.

Flax Seed.—E. C. Bliss, 18½ bu. seed, and 431 lbs. lint on one acre and 24 rods, $5—John McNeil, Washington, good crop, but only one premium.

Butter Dairies.—1. To John Holbert, Chemung, Silver cup, value $50.

Butter—1. To John Holbert, $15—2. To H. C. Tuthill, Kelloggsville, $10.

Seedling Apples.—To Charles Lee, Yates Co., for the Wagener apple, $5 and diploma.

An application for the prize for the best analysis of Indian corn, was referred to a committee, who asked further time to report.

Mr. Johnson reported that Dr. Fitch, who was employed to make an agricultural survey of Washington county, had completed his labors, and that the Report would be published in the Transactions.

Evening—The Society met at the Capitol. The president L. F. ALLEN, Esq., delivered his valedictory address, which was listened to with deep attention, and was of a character deserving high commendation. He gave an interesting view of the general progress of Agriculture in this State, for the last thirty years, with judicious remarks on its present condition and future prospects. At the close of the address, the president elect, JOHN A. KING, Esq., was introduced to the meeting, who in a few appropriate words, signified his acceptance of the office, and tendered his thanks to the Society, which then adjourned.

SHOW OF FRUITS.—There was an extensive and interesting display of fruits, embracing contributions of the best kinds of apples for the season, from different parts of this State and several other states, as well as from Canada. Among the principal contributors, we noticed the names of G. Shepard, J. Frothingham, and Mrs. M'Intosh, of Montreal; A. C. Hubbard, of Troy, Mich. and Judge Barker, of Plymouth, Mich.; F. R. Elliott and J. Gallup, of Cleveland. O.; L. F. Allen and R. C. Allen, of Black Rock; B. Hodge and Wm. R. Coppock, of Buffalo; T. C. Peters, of Darien; H. Hooker, Ellwanger & Barry, J. H. Watts, and Joseph Alleyn, and J. C. Campbell, of Rochester; Thos. Rooraback, John Doulan, Robt. H. Browne, and F. W. Lay, of Greece, Monroe county; C. Paulk, of Mendon, Monroe Co.; John Delafield and John D. Coe, of Fayette, Seneca county; Peter H. Warren, of Columbia, Herkimer county; B. P. Johnson, various samples from Cayuga county; A. Marks, of Durham, Greene county; H. Snyder, of Kinderhook; Justus Harwood and Samuel Rose, of Watervliet; Wilson, Thorburn & Teller, and J. M. Ward, of Albany. Dr. H. Wendell, of Albany, sent several specimens of choice winter pears; Joseph Cary, excellent specimens of Isabella and Catawba grapes; James Wilson, a handsome collection of Camelia japonica and other flowers, among which was the spirea prunifolia; J. M. Lovett, a superb grass bouquet.

The exhibition of fruit attracted much attention, and the rooms were visited by many persons, who unanimously expressed their gratification.

EXHIBITION OF BUTTER.—The liberal premiums offered by the Society for the best butter, to be examined at the annual meeting, brought out several lots on this occasion. Much interest was evinced in relation to the competition in this article, and the premium lots sold readily at twenty-five cents per pound.

The new Executive Committee were in session on Thursday. Among its proceedings was a resolution to hold the next Annual Fair of the Society at SYRACUSE on the 11th, 12th & 13th days of Sept. next.

Notices of Publications

The Agricultural Press.

The first agricultural periodical in the United States, was the *American Farmer*, commenced at Baltimore in 1819. Two or three other publications, devoted to the same subject, were started in the course of four or five years; and the number continued to increase, gradually, till in 1840, there were, or had been in existence, upwards of 30. The number has been constantly varying owing to the commencement of new ones, and the discontinuance of others. The list of those issued at any one time has, we believe, never exceeded 28; and the number now in course of publication, we think is twenty-one—including several which have but just commenced. In noticing these, we will, for the sake of convenience, begin at *one end* of the country.

MAINE FARMER—This excellent weekly paper has entered on its eighteenth volume. It is published at Augusta, by Russel Eaton, and is edited by Dr. E. Holmes, under whose charge it has been from the beginning. We read no paper with more interest than the *Maine Farmer*. Its articles are dictated by good judgment, and are written with spirit and ability. In typographical execution, it has no superior. The people of Maine have been greatly benefitted by this publication, and we are glad to learn that their appreciation of its value is shown by a liberal patronage.

FARMERS' MONTHLY VISITOR—This is a monthly, published at Concord, N. H., and conducted by Ex-Gov. Hill. He is a gentleman of very extensive acquaintance with different sections of the country, and is in the habit of travelling, considerably, through the warm season of the year, and the particulars of his observations are given in the *Visitor*. The paper embodies many interesting incidents, and has some able correspondents.

MASSACHUSETTS PLOWMAN—A weekly paper, devoted to agriculture and news, published at Boston, by J. Buckminster & Son. The editor is an off-hand writer, and infuses much spirit into the columns of his paper.

BOSTON CULTIVATOR—This, like the *Plowman*, is designed as a general *family* paper, the leading department being devoted to agriculture. It is published weekly at Boston, by Otis Brewer. The agricultural department is now edited by James Pedder, well known as former editor of the *Farmers' Cabinet*.

NEW ENGLAND FARMER—A new, semi-monthly periodical, of which we have received the first two numbers, published at Boston, by J. Nourse, and edited by S. W. Cole, formerly editor of the *Yankee Farmer* and the *Boston Cultivator*, and author of a popular work, entitled the *American Veterinarian*. The numbers of the *Farmer* are well filled, and the work promises fair to be useful.

BERKSHIRE CULTURIST—A weekly paper devoted to agricultural and miscellaneous idtelligence. It is published at Pittsfield, Mass., and is edited by Stephen Reed. It has a corps of able correspondents, and is well managed.

VERMONT AGRICULTURIST—Published monthly, at Burlington, Vt., by C. T. Hopkins, and D. W. C. Clarke, and is edited by the first named gentleman. It was commenced in July last, and the numbers thus far issued, have been of a highly creditable character.

AMERICAN AGRICULTURIST—A well known monthly, published at New York by C. M. Saxton. It has for several years been in the editorial charge of Mr. A. B. Allen, an experienced and talented writer. We are informed that his brother, Mr. R. L. Allen, is hereafter to be associated in the management of the *Agriculturist*. The latter gentleman is favorably known to the public as a writer on agricultural subjects, and as author of a valuable volume, entitled "American Agriculture," and several other works. His connexion with the paper alluded to, will be an additional recommendation to its patronage, which has always been liberal and well deserved

FARMER & MECHANIC—A weekly paper published at New York, "devoted to agriculture. mechanics, manufactures, science and the arts." Edited and published by W. H. Starr and J. Alburtis. It is a highly useful paper, giving much valuable information, especially in reference to mechanics.

WEEKLY ARTIZAN—A weekly paper published at New York. devoted to "agriculture, commerce, manufactures, mechanics, education, science and news." Edited by S. Fleet, a gentleman of much experience as a writer, having at various times, conducted several publications. The *Artizan* is well managed, and is eminently worthy of support.

GENESEE FARMER—Published monthly at Rochester, N. Y., by D. D. T. Moore, and edited by Dr. Daniel Lee, associated with Mr. Moore and P. Barry. It is a paper which contains much interesting and valuable matter. The first number of the present volume is beautifully got up. It has a large circulation, and does good service in the cause to which it is devoted.

THE CULTIVATOR—Published monthly, at Albany, by Luther Tucker, and edited by him in connexion with Sanford Howard and John J. Thomas. To complete the list, we mention our own paper, of the merits of which our readers are the best judges.

PLOW, LOOM AND ANVIL—This is a monthly periodical, published at Philadelphia, by J. S. Skinner & Son. We have lately noticed this work, which is still continued under the same favorable auspices as heretofore. The senior editor still wields a vigorous pen, and the publication is conducted with decided ability.

PENNSYLVANIA CULTIVATOR—Pubilshed monthly, at Harrisburgh, Pa., by Foster & Company, and edited by Dr. Thomas Foster. We have received several numbers of this work, which were filed with useful matter.

AMERICAN FARMER—A monthly, published at Baltimore, Md., by Samuel Sands. It is conducted with much ability, and has been of great service in encouraging a spirit of improvement among the farmers of Maryland, Virginia, &c.

SOUTHERN PLANTER—Published monthly at Richmond, Va. It is edited by J. M. Daniel. The paper makes a respectable appearance, and is probably supported to a considerable extent in Eastern Virginia.

SOUTHERN CULTIVATOR—A monthly, published at Athens, Ga., edited by Dr. Daniel Lee, well known at the north as a writer on agriculture. It is a very handsome and useful paper, is well filled with original matter, and appears to be well sustained.

VALLEY FARMER—A monthly, of which we have received the first number, published at St. Louis, Mo., edited by H. Gates and E. Abbott. Mr. Gates was formerly editor of the *Iowa Farmers' Advocate*, which paper has been merged in the *Farmer*. The editors appear to possess the ability to make a good paper.

OHIO CULTIVATOR—Published semi-monthly, at Columbus, Ohio, M. B. Bateham, editor and publisher. This paper is located in the very heart of perhaps the richest agricultural state in the Union. A deep and increasing interest in rural improvement, is manifested by the people of Ohio, and under the impulse of this feeling, it is natural that a paper so well calculated to promote their interest as the *Ohio Cultivator*, should be, as it deserves, well sustained.

MICHIGAN FARMER—Published monthly, at Detroit, Mich., edited and published by the Rev. W. Isham. The editor is an able writer, and if the paper is not properly sustained, the failure is not chargeable to him.

PRAIRIE FARMER—Published monthly, at Chicago, Ill., edited by Messrs. John S. Wright and J. Ambrose Wight. Among all our exchanges, there is none, which we think better fulfils its design than the *Prairie Farmer*. Its editorials are judicious and appropriate, its correspondence is extensive, and its communications and articles generally, of a practical and useful character.

Answers to Correspondents.

Machine for Shoveling.—J. G., Mystic Bridge, Conn. We do not know of any machine of this kind, to be worked by horse-power, but we recollect seeing an account of a contrivance for excavating, which was worked by steam, and used on the Vermont Central Railroad. It could probably be adapted to horse-power. Will some of our readers, who have seen the machine, give us a description of it?

Wringing and Ironing Clothes.—B. W., Meriden, N. H. We are not acquainted with any machine for wringing clothes, and know of none for ironing, except the *mangle*, which, with various modifications, may be seen in use at many of the large city hotels, and most public institutions. If there are any special improvements in these machines, we should be glad to hear of them.

Salt for Sandy land.—T. H. C., New Albany Ind. We are not in possession of any positive knowledge in regard to the effect of salt as a manure on such a soil as you mention. Accounts respecting the effects of this article on vegetation, are very contradictory. Some former trials made by us, did not lead to a very favorable opinion of its usefulness; but we think your safest way would be to try the salt, in various quantities to the square rod. The result may form a guide for the future.

Churn.—J. B., Perrysburg, O. We are acquainted with no churn which we think would operate better than Kendall's, or Crowell's "thermometer churn." Both are for sale at the Albany Agricultural Warehouse.

J. G. P.—Mr. Downing's new work on Country Residences, is in press, and will probably be issued in the course of a couple of months.

C. B.—We have not seen a copy of the Proceedings of the Pomological Convention at New York.

S. B. H.—Millet seed is not to be had in this city.

R. P., Jr.—Nay, to your question.

Butter Worker.—D. C. M., Delhi, N. Y. We have seen several butter workers, all of which were similar to those described in vol. 3d. They work well and are thought a saving of labor. We cannot say what is the price, or where one can be had. Will Mr. B. A. Hall, of New Lebanon, tell us what his cost?

Notes for the Month.

Communications have been received, since our last, from An old Subscriber, Charles R. Smith, Farmer. Dr. G. H. Dadd, N. Longworth, G. Butler, John Johnston, S. F. C., A. S. F., F. Holbrook, J. Gardner, J. G., T. H. C., Isaac Hildreth, W. Doolittle, S. L. Wattles, Wm. N. White, D. A. Morrison, N. S. Smith, S. E. Todd, Agricola, Thos. Allen, J. O'Fallon, D. E. Gardiner, David Thomas, S. D. Martin, D. M.

Books, Pamphlets, &c., have been received, since our last, as follows:—Mr. Fletcher's Address before the Windsor (Vt.) Ag. Society, from J. A. Pratt, Esq. —Mr. Delafield's Address to the Yates Ag. Society, from the author.—Dadd's Chart of Veterinary Practice, from the Author.—Belcher's Farmer's Almanac, from C. H. Belcher, publisher, Halifax, Nova Scotia. —Prof. James Hall's Address before the Harvard Natural History Society, from the Author.—California Gold Regions, with an account of its mineral resources and sketches of the country—a 12½ cent pamphlet—from the publisher, W. H. Graham, New-York.—Rev. Dr. Bacon's Address to the New Haven Co. Hort. Society, with the Transactions of the Society for 1848.—Laws of the United States, relating to Patents and the Patent Office, with the Decisions of the U. S. and State Courts, relating to the same, to which is added an Abstract of the Patent Laws of other countries, compiled by the Commissioner of Patents, from Hon. S. Cameron, U. S. Senate.—Two packages of Brewer's Compound Marshmallow Candy, prepared by our excellent agent at Springfield, and recommended for diseases of the throat and lungs.—Report of the First Exhibition of the Worcester Co. (Mass.) Mechanic's Association, from Wm. B. Emery.

W. N. W., Athens, Ga. We shall be glad to hear from you in the way you propose.

Back Vols. and Nos. of the Cultivator.—All the engravings and plates of the vol. for 1848, having been burnt, we shall not reprint that vol.; and consequently, we cannot supply orders for that volume *singly*. We have, however, succeeded in purchasing a number of copies of it, which will enable us to supply orders for entire sets of the Cultivator, for one or both series. We can supply all the Nos. for 1848, *except the first three*—all the Nos. for 1847, and a part only of the Nos. for some of the previous years.

☞ We shall supply all orders for single back Nos. as far as we can, and those who do not receive the Nos. for which they write, will understand that it is because we do not have them to send.

Cultivator Almanac.—This Almanac was not published for 1849—consequently, we cannot comply with the numerous requests for it.

Models of Sheep.—We have received from John A. Taintor, Esq., of Hartford, Ct., a plaster model of one of his Merino Sheep. The Secretary of the New-York State Agricultural Society, has also received two similar models, representing different Merinos belonging to Mr. T. They are fine specimens of the art of modeling animals, and are very perfect representations of the animals themselves. They are the first *American* specimens we have seen of this art, and are highly creditable to the artist.

☞We have received from Mr. Daniel F. Newell, of Southbridge, Mass., samples of two kinds of apples. We do not know the name of either. They appear to arrive at maturity early in the fall, and were over ripe when brought to us. On this account it was impossible to decide fully as to their natural flavor, though they are evidently *good*.

Profitable Swarm of Bees.—Mr. W. Doolittle, of Borodino, N. Y., states that about the 20th of June last, he had two swarms of bees come out, and they went, together, into one of Weeks' patent hives. Thinking there would not be room for them to work, he added two more boxes on the outside of the hive, at the bottom. They immediately went to work, and made seventy pounds of nice honey, besides plenty left in the hive to winter the bees.

Spiræa Prunifolia.—In our December number, we gave a cut and description of this beautiful shrub. We have since seen it in flower, in the green-house of Mr. James Wilson, of this city. It is certainly a beautiful plant, and Mr. W. thinks it will be sufficiently hardy for the open air. In the house, it will give a succession of flowers the whole winter. From present appearances, it will be a valuable acquisition to our list of flowering shrubs.

Weekly Agricultural Meetings.—Arrangements have been made for the usual weekly meetings in Albany, for the discussion of subjects relating to agriculture. Reports of the remarks made at the different meetings will be published in the *Albany Evening Journal*, and the substance of them will be embodied in the forthcoming volume of *Transactions* for the New York State Agricultural Society. We may also find room for publishing some portion of the discussions in the *Cultivator*.

Colts of the Morgan Stock.—Mr. S. A. Gilbert, of East Hamilton, Madison county, lately passed through this city with three fine colts and a filly, which he had purchased in New Hampshire and Vermont. Two of the colts and the filly were foaled in 1848, the other colt in 1847. They were all got by the Gifford Morgan, and, with the exception of the filly, were out of mares having more or less Morgan blood. The yearling, a very superior colt, in points and action, was by Gifford Morgan, dam by Green Mountain Morgan, grand dam "a Messenger mare." The dam of one of the other colts was a fine mare by the Sherman Morgan. We feel confident that these animals will prove of much importance to the section for which they are destined, and we would call the attention of farmers to them.

Importations of Saxon Sheep.—We are informed that John A. Taintor, Esq., of Hartford, Ct., has lately received a lot of very fine sheep, selected from the choicest flocks in Saxony. In addition to remarkable fineness of wool, they are said to possess large size and good constitutions. We are also informed that another importation of Saxon sheep, has been made by Messrs. D. W. Catlin, of New York, and Chas. B Smith, of Wolcottville, Ct. We understand that a part of the lot is owned by T. W. Swift, of Amenia, Dutchess county, N. Y. They are said to combine great weight of fleece with fine quality, and were selected by a German of the best judgment, who owns several thousand sheep. We expect to receive, shortly, samples of the wool of these sheep.

New kind of Fence.—A subscriber at Vergennes, Vt., wishes some information in regard to a kind of fence, which is said to be made of posts, set in the ground two rods apart, with strips of sheet iron, an inch and a-half wide, fastened on—the iron prepared in oil, and painted white, to resist the action of the weather—the cost less than thirty cents per rod. We have no knowledge in regard to such a fence, and shall be obliged to any of our correspondents who will furnish any information as to its utility, cost, &c.

Exhaustion of the Soil.—The *Valley Farmer*, published at St. Louis, Mo., says, "There is no portion of the globe that is being exhausted of its fertility by injudicious cultivation, so rapidly as the Mississippi Valley, at this present time."

Dadd's Chart of Veterinary Reformed Prac

TICE.—Being a synopsis of the diseases of horses, cattle and sheep, with their causes, symptoms and treatment." We have received a copy of the above chart, and from the attention we have given it, are inclined to think it useful to the farmer, and all others who keep animals. It is published by G. H. DADD, M. D., Boston.

THE HORTICULTURIST.—This work, now in its third volume, is regularly issued from this office, on the first of each month, every number embellished with a frontispiece, and illustrated by numerous engravings. It is edited by A. J. DOWNING, Esq., the well known and popular writer on rural matters, in which department it is not deemed too much to say, that he is without any equal in this country. The number for the present month, opens with an admirable article "On the Drapery of Cottages and Gardens," showing how easily, and at what a trifling expense, the most forbidding dwelling may be converted into one of the most inviting and prepossessing appearance, simply by placing around it a bit of smooth grass and a few trees and climbing plants, which, while they cover all that before was unsightly, are in themselves highly ornamental, and impart gracefulness to what was previously destitute of every thing like attraction. Terms $3 per year—two copies for $5. Orders to be addressed to LUTHER TUCKER, Albany.

COTTON MANUAL.—We perceive by a prospectus sent us, that Mr. R. MORRIS, of Mount Sylvan, Miss., proposes to publish by subscription, a work with the above title. It is to consist of three divisions, or volumes; the first to comprehend the experience of the best planters, as to implements, soils, manures, preparation of the ground, culture, &c.; the second is to relate to matters connected with the transportation of cotton; and the third will be devoted chiefly to manufactures, with descriptions of machinery for spinning, weaving, &c. The work is to be published in one vol. octavo, (three bound in one,) 600 pages, elegantly bound, extra gilt, to be delivered to subscribers by the close of 1849, at $5 per copy.

IMPORTED BLOOD HORSE.—We are informed that Mr. O. R. LAPHAM, of Peru, Clinton county, N. Y., has recently purchased an imported thorough bred stallion, called Leopard. He was bred in England, by the Duke of Bedford; was foaled in 1842, got by Liverpool out of Smacker, by Camel, &c. He is said to be the winner of several races in England, as the Sweepstakes at the New-Market course in 1846, and a purse at Ascot the same year. His weight is said to be over 1100 lbs. and his height 16 hands. He is represented as a well formed and vigorous horse, and we hope he will improve the stock of the country.

FINE CATTE.—In our volume for 1844, we noticed a pair of yearling steers, belonging to Mr. NATHANIEL DODGE, which were exhibited at the Show of the Massachusetts Society for Promoting Agriculture, at Worcester. We had, lately, the opportunity of seeing the same cattle again, at Mr. Dodge's farm, in Sutton, Mass. They are now fat, and weigh, as we were informed, 5,100 pounds. They are fine cattle—equaling in weight, in proportion to bone, any that we have seen. Their breadth and bulk of body in proportion to their height, is remarkable. We were informed that they were to be exhibited for a while in Boston.

RECLAIMING LAND.—JOSEPH GRISWOLD, Esq., of Mystic Bridge, Ct., informs us that he has reclaimed a tract of bog land, of 55 acres at an expense of $3000, or a little over $54 per acre. We presume it is a profitable investment. We have known a larger outlay per acre in several instances, which yielded a good profit. Such reclaimed lands sometimes pay an interest of more than $200 an acre in *hay*.

LARGE PIGS.—Mr. HORATIO AMES, of Falls Village, Ct., slaughtered two pigs on the 25th Dec. last, which were eight months and nineteen days old, of the following weights: 304 and 460 pounds. They were of different litters. Mr. A. thinks it would have been an easy matter to have brought the large one to the weight of 500 lbs. at the time he was killed. We do not know the breed of those pigs. We saw them about the first of October. They were well proportioned shoats, calculated to fat at any age.

USE OF PEAT.—The farm of W. O. Bartlett, Esq., near Worcester, Mass., embraces considerable tracts of peat bog. Some of these he has drained, and brought into a state suitable for the production of crops. He has dug out large quantities of peat, which has been used for fuel and for manure. For manure, it has been used in various ways; it is constantly placed in the cattle and horse stalls, where it absords the urine, the ammonia of which, being a powerful alkali, decomposes the acid of the peat, and brings its fertilizing principles into a soluble state. It has been made into compost with stable manure, and Mr. B. states that he has found a mixture of part manure and two parts peat, laid up in alternate strata, and allowed to pass through a moderate fermentation, produces as good crops of any kind, as an equal quantity of common manure. Mr. B. has also used the ashes and fine charcoal waste from locomotives. This is excellent to mix with peat—the alkali causing the peat to crumble to fine pieces, after which it produces good effects as a manure.

HUSSEY'S REAPING MACHINE.—We are informed that a bill is now before Congress for renewing the patent of this machine. We are also informed that Mr. H.'s improvement in the cutting apparatus of the machine, patented in 1847, is considered indispensible in reaping and mowing machines. A communication from Mr. HUSSEY will be given in our next.

THE LATE SMITHFIELD CATTLE SHOW.—The late show of fat cattle, sheep and swine, held by the Smithfield Club, (London,) appears to have been one of the best which has taken place for twenty years. It will be remembered that the different breeds are here brought into competition with each other, and it will probably interest some of our readers to see how they compare, as to the prizes taken by each. Of the six classes for oxen and steers, the prizes were taken by the different breeds as follows: Class 1, four to five years old, first prize, Hereford; second and third, Short-Horns. Class II, three to four years old, first and second prizes, Herefords; third, Short-Horn. Class III, two to three years old,—three prizes, all Short-Horns. Class IV, "any breed or age above 80 stone (1120 lbs.) and under 95 stone (1330 lbs.) weight," two prizes, first, Devon, second, Hereford. Class V, "any breed or age not exceeding 80 stone (1120 lbs.) weight,"—two prizes, both to Devons. Class VI, Scotch, Welsh and Irish breeds—one prize—taken by a West Islander. In the three classes for fat cows and heifers, there were six prizes, of which the Short-Horns took four, (including all the first prizes,) and the Herefords two. In the class of "extra stock," a Short-horn ox took the prize. The first prize in the first class, (Hereford ox,) was taken by Prince ALBERT, who also took a £10 prize for pigs, and a "silver medal as the breeder." The gold medal for the "best ox or steer in the show yard," was awarded to a Devon, (in class V,) bred and owned by the Earl of Leicester.

SUNFLOWER OIL.—Several inquiries having lately been made in regard to this article, we give the following from the *Morgan (O.) Chronicle*. The article is from the pen of Dr. S. A. Barker:—

"Some years since, several barrels of sunflower oil were made in this county, and those who remember it, never wish to see any more. Some of it was said to have found its way into barrels marked 'Linseed Oil,' and was used for painting. The paint would not dry, and unless some better drier than any now known can be found, it is useless for that purpose. Some was burned in lamps, in Zanesville, we know. While burning it gave out a large quantity of gas, similar to that of charcoal, deleterious to life and health. It is totally unfit for burning, in a close apartment. Some was used for oiling machinery, but it was condemned even for that purpose, The seeds afford a large quantity of oil, but so inferior for all purposes, that its manufacture should not be encouraged."

LARGE DAIRY.—Col. JUDAH PIERCE, of Truxton, Cortland county, N. Y., keeps 140 cows, and made in 1848, *seventeen tons* of cheese. Who made more from the same number of cows?

PROFITS OF DAIRYING.—The *Ohio Cultivator* states that ORRIN WILSON, of Huntsburgh, Geauga Co., Ohio, realised from 17 cows, the past season, the sum of $606, equal to $34.64 cts. to each cow. The calves sold and the hogs fattened from the waste of the dairy, are not included in the above amount. Cheese was the principal article, but the quantity made or the price obtained, are not mentioned.

Prices of Agricultural Products.

New-York, January 18, 1849.

FLOUR—Genesee, per bbl., $5.75*a*$5.87—Michigan, $5.69.

GRAIN—Wheat, per bush., $1.10*a*$1.12½—Corn, Northern, 67c Southern, 59a61c.—Rye, 65a67c.—Barley, 64a65c.—Oats, 42a44c.

BUTTER—best, per lb., 19*a*21c.—western dairy, 15*a*18c.

CHEESE—per lb., 6½*a*7c.

BEEF—Mess, per bbl., $11.50*a*12—Prime, $7.60*a*$8.25.

PORK—Mess, per bbl., new, $15.75*a*$16—Prime, $13.50*a*$14.

LARD—per lb., 7*a*8c.

HAMS—Smoked, per lb., 7*a*9c.

HEMP—American dew-rotted, per ton, $155*a*160.

TOBACCO—per lb., Kentucky, 2½*a*7.

COTTON—Upland and Florida, per lb., 6½*a*7½—New Orleans and Alabama. 6¾*a*7¾c.

WOOL—(Boston prices) Prime or Saxon fleeces, per lb., 35*a* 40.

American full blood Merino,	31*a*33c
" half blood do.,	26*a*29c
" one-fourth blood and common,	24*a*26c

Agency for Patents, Washington, D. C.

ZENAS C. ROBBINS, MECHANICAL ENGINEER AND SOLICITOR FOR PATENTS, will prepare the necessary DRAWINGS and PAPERS for Applicants for Patents. and transact all other business in the line of his profession at the Patent Office. He can be consulted on all questions relating to the Patent Laws and decisions in the United States or Europe. He will procure rehearings on rejected applications for Patents, discover and point out the novel features—if there be any—prepare new papers, and obtain Patents in all cases where there is any novelty involved. Persons at a distance, desirous of having examinations made at the Patent Office, prior to making application for a Patent, may forward (post paid,) enclosing a fee of five dollars, a clear statement of their case, when immediate attention will be given to it. and all the information that could be obtained by a visit of the applicant in person. relating to the novelty of their invention. and the requisite steps to be taken to obtain a patent therefor—should it prove new—will be promptly forwarded to them by mail.

All letters on business must be post paid, and enclose a suitable fee, where a written opinion is required.

Office on F Street, opposite the Patent Office.

He has the honor of referring, by permission, to—

Hon. H. L. ELLSWORTH. late Commissioner of Patents,
" WILLIS HALL. New York,

And to the following testimonial from the Hon. Commissioner of Patents:

WASHINGTON, *November* 28, 1848.

To all whom it may concern:

During the time I have filled the office of Commissioner of Patents, and for some time previous. ZENAS C. ROBBINS, Esq., has followed the business of Patent Solicitor in this city, and has been in the daily prosecution of business in the line of his profession at the Patent Office.

I am well acquainted with Mr. ROBBINS personally, and believe him to be a man of integrity and ability, to whom persons at a distance may safely entrust their business. I am pleased to have the opportunity to say that he is faithful to the interests of his clients, and has been, thus far, very successful in the practice of his profession. EDMUND BURKE.

Feb. 1.—1t.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

Selling Off.

LINNÆAN BOTANIC GARDEN AND NURSERY, late of WM. PRINCE, deceased. *Flushing, L. I, near New-York.* WINTER & Co., Proprietors.

In consequence of the decease of the Junior and of the advanced age of the surviving partner, the entire stock of this establishment, comprising every description, including the newest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., will be disposed of at *very reduced prices*, in order to close the business as speedily as possible.

Orders accompanied with the *cash*, to the amount of TEN DOLLARS, or upwards, will be supplied at a reduction of 25 *per cent* from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by *wholesale*, will be supplied at such reduced prices, according to kind and quantity. as will probably prove satisfactory to them.

DESCRIPTIVE CATALOGUES *gratis*, on application, *post* paid. Feb. 1.—2t.

A Good Book Coming!

ALLEN'S COMPEND OF AMERICAN AGRICULTURE.

R. L. ALLEN, Esq., author of the popular work, entitled "Domestic Animals, their Diseases and Remedies," of which thirteen editions have been published in 12 months, has, after years of practical experience and close investigation, completed his GREAT WORK OF PRACTICAL AGRICULTURE, illustrated by about 100 engravings. The work will be bound handsomely and substantially in cloth, and furnished at One Dollar, single copies, and can be sent by mail to any part of the United States.

This work, we most fully believe, is destined to have a more widely extended circulation than any work of the kind heretofore published. Mr. Allen, knowing the wants of the community, has met those wants in a plain, concise and familiar manner, and has made a work intelligible to ALL. It will be a book for

THE WHOLE PEOPLE,

and will be published about the 10th of February. Its cheapness will cause a large sale, and it will be a

BOOK FOR EVERYBODY,

As well for the man who consumes the products of the earth, as for him who raises them.

ONE HUNDRED AND FIFTY AGENTS,

Active, intelligent and honest, are wanted to sell this book, in every State in the Union. A cash capital of from $25 to $50 will be necessary. Address, (*post paid*) C. M. SAXTON

Feb. 1.—1t. 121 Fulton St., New-York.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers. Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud. and well branched, including the very best sorts. Red Antwerp, Fastolff. Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new.) Knight's Large Red, White Crystal. and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c Dahlias, including the new fancy sorts.

Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON.

Poudrette.

THE LODI MANUFACTNRING CO.. offer their new and improved Poudrette. for sale at their usual rates:—1 bbl. $2—3 bbls $5, and $1.50 per bbl. for any quantity over 7 bbls.. delivered free of expense on board of vessel in New-York. At the Factory, where vessels drawing 8 feet water can come, it will be sold at 25 cents per bushel.

The expense per acre in manuring corn with Poudrette, will amount to about $4. calculating 25 cents per bbl. freight, and all the necessary labor included. On land previously manured, or on good sward land, one gill to the hill is sufficient—on poor ground, a good crop can be raised by one gill at planting, and one at the last hoeing. The cost of the labor alone in manuring corn in the hill with barn yard manure, will amount to more than the first cost of the Poudrette. with freight and all charges added; and the effects of Poudrette are quicker, more vigorous, and the corn reaches maturity earlier. A fair trial, *however small*, is respectfully solicited.

Apply. if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York.

Feb. 1.—3t.

Seedling Potatoes and their Seed.

N. S. SMITH'S late improved Buffalo Seedling Potatoes, selected for planting purposes, from his late crop of 1,400 bushels, sound and healthy:—Buffalo Pinks, Russets, Reds, Whites, Orange, Purple, and Early Junes, in equal proportions, or otherwise, carefull packed in chaff, and delivered at the wharf or depot. The late increase of the stock, and a desire to make the benefits of the experiment available to all who desire such an improvement, the price is reduced to $2 per bushel, $4 per barrel.

Also seed from the balls of the late crop, combining all the approved varieties that have been collected from abroad, and also connected with the experiment for 8 years past, prepared in the best manner, and warranted to vegetate; and cannot fail producing splendid crops of many varieties of marketable size, in packets sufficient for about five bushels, and may be transmitted by mail at single postage, at twenty-five cents per packet; with directions for cultivation. To seed merchants, per lb., at a great profit. These potatoes were again awarded the first premiums at the late State Fair.

All communications, pre-paid, will receive prompt attention. Transportation of tubers safe from frost after the first of March.

Buffalo, Feb. 1—1t. N. S. SMITH.

N. B. I would say to my last year's customers, that, from the partial failure of my own potato seed, sown last spring, to vegetate, it is evident that in the process of preparation during the incessant rains of the fall of '47, some parts at least of that seed, must have been injured by lying too long separated from the balls in a wet state. If those whose seed likewise failed, will inform me, they shall be supplied from my present superior stock, without charge.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown to be of a dangerous tendency. These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural unctions, without diminishing or destroying their power, hence are safe in the hands of every one.

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S Horse and Cattle Medicine Depot, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines.

Feb. 1—3t.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample. T. C. PETERS & BRO.

Buffalo, Dec 1—6t.

A Good Book Coming!

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Vetinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

First—It is a mature work and a practical one, one which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and ultra scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

Secondly—It will have an unprecedented sale on account of its cheapness. It will make a volume of 288 closely printed pages. Illustrated with over one hundred beautifully executed engravings, by Brown, and will be sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It will contain full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work will be published early in February.

ONE HUNDRED AGENTS,

Active, intelligent and honest, are wanted to sell this book, in every State in the Union. A cash capital of from $25 to $50 will be necessary. Address, (*post paid*) the Publishers.

JOHN P. JEWETT & CO., 23 *Cornhill*, *BOSTON*.

☞ A rare chance for Agents to make money. Feb. 1.—3t.

Chemical Manure

Manufactured by " the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The " G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

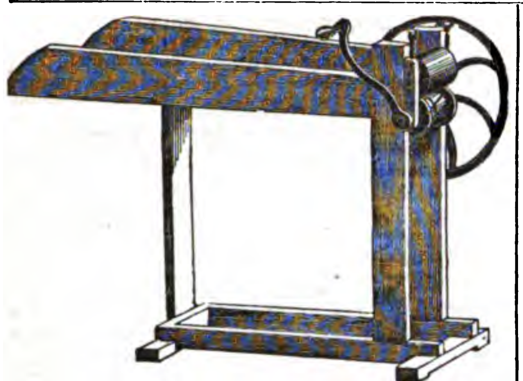
37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan.,1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



Premium Hay and Straw Cutters,

BY RUGGLES, NOURSE AND MASON.

WE have recently made improvements by greatly simplifying and strengthening the construction of that kind of Hay and Straw Cutters, having *spiral* or *crooked* knives set upon the circumference of a cylinder, or arbor, and cutting against a hide roller.

The *NEW YORK STATE AGRICULTURAL SOCIETY*, at Buffalo, and the *AMERICAN INSTITUTE*, at New-York city, at their respective Fairs, held in September and October last, awarded their first premiums to these Machines, and the *Worrester County* (*Mass*) *Mechanic's Association*, at their Fair awarded to them its highest commendation. The Committee of the latter, in commenting favorably upon the mechanical skill, design and arrangement of the knives of "Hovey's Patent Spiral Straw Cutter," in their report, say: "Were these Cutters to be used only by mechanics whose skill might, at any time, be applied to keep them in order, we might come to a different conclusion from that which is stated below:" and then add—"But Straw Cutters are used more generally by farmers, and are sent not only to the remotest parts of this country, but into all parts of the world, where mechanical skill may not be at command. In view of these facts, it is the opinion of your Committee, that no Cutter or other machine should be recommended to the agricultural community, or can be very useful to them, which is not simple in its construction. And this simplicity must be obtained, if need be, at some loss in other respects.

"Straw Cutters made by Ruggles, Nourse & Mason, and entered by them, have straight knives placed diagonally upon the arbor and fastened at the ends by caps. These Cutters are very simple in their construction, so much so, that any part, liable to get out of repair, may be repaired by any mechanic of ordinary skill. The cylinder of one of these Cutters with ten knives, consists of only *fifteen pieces*, while that of one of Hovey's, with the same number of knives, consists of *ninety-one*. In the same cylinder of Hovey's Cutter, there are one hundred threads cut and tapped—in that of R., N. & Mason, *none*. These facts will show the liability of the two machines to get out of order, and the ease or difficulty with which they may be repaired.

"After the most careful examination into the merits of these Cutters, *theoretically* and *practically*, your Committee have come to the conclusion, that the machine made by Ruggles, Nourse & Mason, is the best, and they recommend it as the Cutter which will prove the more useful one to the community in general."

The improvements consist:

FIRST. The adopting straight knives, and so placing them on the arbor, (diagonally) that they work in the same manner as the spiral knives, and being straight can be ground by the person using them. with the same facility as other farm implements.

SECONDLY. They can be replaced by the common blacksmith when worn out, or new blades can be obtained of the makers or dealers, at trifling cost.

THIRDLY. All the knives are confined to the arbor with simply two caps, and two pins, instead of eighty distinct pieces, consisting of small and delicate screws and nuts, liable to be lost or injured, by which the great liability to get out of repair, or the knives to twist, cripple and break, is obviated.

FOURTHLY. The roller, when used with straight knives, properly set, will endure much longer than when used with spiral knives.

FOR SALE AT

H. L. EMERY'S Albany Agricultural Warehouse, Albany. N. Y.
A. B. ALLEN & CO., 189 & 191 Water St., New-York.
FOSTER & CO., Utica. N. Y.
J. & E. B. ARMSTRONG, Rome, N. Y.
E. J. FOSTER, Syracuse, N. Y.
RAPALJE & BRIGGS, Rochester, N. Y.
T. C. PETERS & CO., Buffalo, N. Y. And at their

QUINCY HALL AGRICULTURAL WAREHOUSE AND SEED STORE, (over the Market.) South Market Street, Boston, together with their celebrated *Eagle Plows*, and an extensive assortment of *Agricultural* and *Horticultural Machines* and *Tools*, Field and Garden Seeds, Guano, Bone Dust, Poudrette, &c. Also, a full supply of implements made by them. for sale

AT THEIR WORKS IN WORCESTER.

☞ A liberal discount to Dealers, and Descriptive Catalogues gratis, if ordered by mail or otherwise. Feb. 1.—1t.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THIS work is published by the proprietor of "The Cultivator," at his office in Albany, to whom all orders should be sent. Two volumes are completed, and the third is now in course of publication. The numbers are issued promptly on the first of the month, each containing 48 pages, and embellished with an engraved frontispiece, and illustrated with numerous engravings of Rural Cottages and Villas, Farm-Houses, Gates, Lodges, Ice-Houses, Vineries, Fruits, Flowering Shrubs and Plants, &c., &c.

TERMS.—Three Dollars per year—Two copies for Five Dollars.

☞ Subscribers may commence with the volume in July, or with the January number. The back Vols. and back Nos. can be furnished.

Agents for "THE CULTIVATOR," will do us a favor by acting also as Agents for "THE HORTICULTURIST," a work designed to promote rural taste and rural art, not only in the orchard and the garden, but in all that gives character and pleasure to a country residence. LUTHER TUCKER.

To Nurserymen, Orchardists, and Planters.

THE subscriber offers for sale at his Nurseries, Plymouth, Mass., Pear, Quince, Cherry, Plum, Apple, and Dwarf Apple, (Paradise) stocks, suitable for budding next August, or for spring grafting. Also, the following ornamental tree stocks, from two to three feet high, and stout, viz: Mountain Ash, Oak, Hawthorn, Elm, Spanish Chestnut, Horse Chestnut, Birch, Beech, Ash, Norway Maple, Sweet Brier, Larch, Scotch fir, (2 ft.) Silver fir, (1ft.) Spruce fir, (1ft.) Norway fir, (1ft.) Arbor Vitæ, (15 in.)

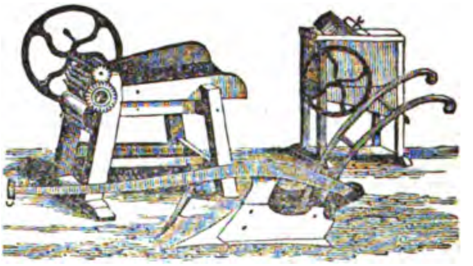
Also, 20 of the finest sorts of PEARS, standard and dwarfs.

Priced lists sent to post paid applicants.

Oct. 1—5t B. M. WATSON.

Grant's Patent Fan-Mills.

I. T. GRANT & CO., Junction, Rensselaer county, N. Y., continue to manufacture these celebrated mills. They have been awarded five first premiums at the New-York State Fairs and the Fairs of other States, and in no instance has any other mill of the kind received a premium over them. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the last year they were introduced into England, by Mr. Slocum, of Syracuse They were very favorably noticed by the English papers; and from a communication of M S.'s, published in the Transactions of the New-York State Ag. Society for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains as before. Our agents are H L. Emery, Albany G S. & F. A. Willis, Pittsfield, Mass; Parsons & Dickinson, Springfield, Mass.; John Mayher & Co, 195 Front Street, New York; Benj. Myers. Newark, N. J.; S & E. Hasbrook, Stone Ridge, N Y; James S. Browne, Newburgh. N. Y.; H. Warren, Troy; Hugh Van Alstyne, Kinderhook; S. & M. Peckham, Utica; E. Whitman, Jr., Baltimore, Md; Fitzhugh Coyle, Washington, D. C; Denison & Webster, Savannah, Geo. Address I T. GRANT & Co., Junction, P. O., Rensselaer county, N. Y., by whom all orders will receive prompt attention Sept. 1.—6t.



John Mayher & Co.

United States Agricultural Warehouse. 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order

New-York, Oct. 1, 1848.—tf.

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Premiums for Subscribers to The Cultivator.

TO AGENTS, POSTMASTERS, &C.

As an inducement to greater activity on the part of those to whom we are already under so many obligations for their annual efforts to procure subscribers to *The Cultivator*, the publisher offers the following Premiums for subscriptions to the volume for 1849:

1. To the one who shall send us the largest number of subscribers to The Cultivator for 1849, with the pay in advance, at the club price of 67 cents each, previous to the 20th of March next, the sum of FIFTY DOLLARS, to be paid in Agricultural and Horticultural Books, and to include a complete set of *The Cultivator* from its commencement to the end of 1847—15 vols. bound, at $18,—and the first and second vols. of The Horticulturist, bound, at $7.

2. To the one sending us the next largest number, the sum of FORTY DOLLARS, in books, and to include sets of The Cultivator and The Horticulturist, as above.

3. To the one sending us the next largest number, the sum of THIRTY DOLLARS, in books, and to include ten volumes of The Cultivator, bound, at $13, and the first and second vols. of the Horticulturist.

4. For the next largest list, the sum of TWENTY DOLLARS, in books, to include the first four volumes of the new series of The Cultivator, and the 1st and 2d vols. of The Horticulturist.

5. For the next largest list, TEN DOLLARS, in books.

6. For the Five next largest lists, each the 1st and 2d vols. of The Horticulturist, bound, $7.

7. For the next Ten largest lists, each, a copy of the 2d vol. of The Horticulturist, bound, $3.50.

8 For the Ten next largest lists, each, vols. 5 and 6 of The Cultivator, for 1838 and 1839, the last two edited by Judge Buel, and containing his portrait.

9. For the Ten next largest, each, a copy of Downing's Fruits and Fruit Trees, or any other work to the same amount, $1 50.

10 For the Ten next largest, each, a copy of Thomas' Fruit Culturist—50 cents.

☞ In all cases, the payments must accompany the orders for the papers.

To Farmers and Planters.

FIVE Thousand Plows for sale at all prices, from $1.50 up; well made, of the most durable materials, on the latest improved principles, and adapted to every soil, crop, and manner of cultivation. A. B. ALLEN & Co., 189 & 191 Water St., N. Y.

Gold Washing Machines.

LEAVENWORTH'S PATENT.—The superiority of these machines over all others is, that the Gold, Platina, Cinnabar (ore of Quicksilver) and black sand (containing a large per centage of gold) cannot escape; and that the gravel and dirt pass off without detention. These machines will perform more and better work than any other ever constructed. They may be operated by hand, horse, water or steam power. Price of hand machines, $25 to $35 each; horse power machines $50 each. Additional sieves, castings, irons and boxing extra.

In addition to the above, emigrants to California, will find at our Warehouse a large and complete assortment of the best and most recently constructed mining tools of all kinds; smelting and assaying apparatus, crucibles and retorts with printed directions for using. Pumps and Hoes, Whitney's celebrated Rifles, Wagons, Carts and Wheelbarrows Agricultural implements, Field and Garden Seeds, &c. &c., at the lowest prices.

The public are cautioned against purchasing Gold Machines, imitations and counterfeits of Mr. Leavenworth's patent, as he has directed his agent at San Francisco, E. Crosby, Esq., to enjoin all persons from using such on their arrival at California.

A. B. ALLEN & Co., 189 and 121 Water st., New York
Feb. 1.—2t.

Ayrshire Cattle For Sale.

THE subscriber having disposed of his farm, will sell at public auction at Three Hills Farm, on the Cherry Valley Road, 2½ miles west of Albany, on the 14th of March next, his choice herd of Ayrshire Cattle, consisting of the imported cow "Allice," her daughter, "Fairy," for which the first premium was awarded at the fair of the New-York State Agricultural Society, held at Saratoga Springs, in 1847. "Lassie," three years, "Moggie," two years, "Norma," one year, and "Jenny Dean," 9 months old. Two year old bull and bull calf. Also, several head of cows and heifers, a cross of Ayrshire and Durhams.

These cattle, except "Allice" and "Fairy," were bred by the subscriber, are principally young, and rich milkers. Also, 2 young boars, and several breeding sows of the Medley breed.

Catalogues, with pedigrees, &c., will be furnished at the sale.
Albany, Feb. 1, 1849.—2t.

Peruvian Guano.

ONE Thousand Tons of Peruvian Guano, just received from the Chinche Islands, for sale in lots to suit purchasers.

Also, THREE HUNDRED TONS Patagonian Guano
A. B. ALLEN & Co., 189 & 191 Water St., N. Y.
Feb. 1.—2t.

Books for Rural Libraries.

THE following works are for sale at the office of The Cultivator, No. 407 Broadway, Albany:
American Agriculture, by R. L. Allen, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole, 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $3.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Animals, by R. L. Allen, 75 cents.
Dictionary of the Farm, by W. L. Rham, (English,) $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50.
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing, $3.50.
Ladies' Companion to the Flower Garden, $1.25
Rural Economy, by Boussingault, $1.50.
Treatise on Milch Cows, by Guenon, bound, 62½—in paper, 37½.
Transactions of the N. Y. State Ag. Society, $1 per vol.
The Cultivator, 1.25 per vol.
The Horticulturist, $3.50 per vol. bound.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

☞ The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:
NEW-YORK—M. H. Newman & Co., 199 Broadway.
BOSTON—J. Breck & Co., 52 North Market-st., and E. Wight, 7 Congress-st.
PHILADELPHIA—G. B. Zieber.

Advertisements—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from these terms.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, MARCH, 1849. VOL. VI.—NO. 3.

Sketches of Farms.

The Farm of W. A. Hayes, Esq.

(Concluded from page 82.)

EDITORS OF THE CULTIVATOR—In a former communication, I proposed to speak further of Judge HAYES' farming, under the following heads:

MANAGEMENT OF THE ARABLE LAND.—As the lands yielded nothing at the time of Judge HAYES' purchase, the first object was to place them in a state of productiveness as soon as possible. He therefore commenced by plowing up a large tract each year, putting on all the manure that could be scraped together, by a careful collection and saving of every available material. The fields were planted to hoed crops but one year, and the next spring stocked to grass with spring grain. The main idea was to enrich the lands as fast as possible; and to accomplish this, he wished to plow as often as was practicable,—thus availing himself of the great quantity of vegetable matter contained in the sod, for the improvement of the soil. The land was prepared for seeding by loosening and leveling the surface with a heavy harrow, without again bringing to day the decomposing sod. After having gone over all the arable lands once in this way, he then commenced again, by plowing up smaller fields and manuring more heavily. This he could now do, for the increasing produce and stock enabled him to enlarge the compost heaps. Since that time, not less than twenty loads of compost, of 50 bushels each, have been applied to the acre.

The sward-land is plowed in the fall—it being the most convenient time to do the work—to the depth of 6 or 8 inches, and the following spring, 20 loads or 10 cords of manure to the acre, are spread upon the surface and thoroughly harrowed in. Each load is divided into 8 heaps, a rod apart every way, which just does it. The distance at which the heaps should be placed, is regulated with sufficient accuracy, by noting the distance from the hind end of the cart to the forward feet of the cattle. The field is planted to corn, potatoes, and the various root crops one year, and the next spring a large heavy harrow, with sharp cultivator teeth, instead of the common harrow teeth, is passed several times over the land, both ways, leveling and mellowing the surface, without disturbing the sod underneath. Spring grains, with a generous supply of grass-seeds, are then sowed, and the work finished with a large roller, some four feet in diameter. In this way, the grass-seed has never failed to take well, and give a good crop, the second year, for over twenty years.

Great attention is paid to clean cultivation, it being believed to be a saving of labor, in the long run. Of course, no weeds are permitted to rob the hoed crops of nutriment, or spread their ripened seeds upon the land. The root crops, particularly the carrot, are highly esteemed as succulent food for the stock in the winter. Several hundred bushels are annually raised, the ground for them being prepared by plowing a part of the manure under the sod, and harrowing in a part upon the surface. The corn-stalks are not cut until the ear is pretty well ripened; and the butt-stalks are carefully secured under cover, with alternate layers of straw, which prevents too great degree of mouldiness, and renders the whole quite palatable to the cattle in the coldest weather of winter. The average cut of hay has been upwards of 100 tons, for several years. About half of it is consumed upon the farm, and the balance sold. This fact, in contrast with the one stated in my former communication, that "these lands originally produced only hay enough for the wintering of 6 or 8 head of cattle," would seem to render superfluous all comment upon the efficacy of Judge Hayes' mode of culture, in enriching his soil.

IMPROVEMENTS BY MIXING SOILS.—As before stated, the farm extends over a high swell, with lowlands on each side. These lands abound in clay, containing, by analysis, 5 per cent. of lime. Considerable has been done in the business of carting the clay on to the sandy soil and the sand on to the clay, and this mixture has been attended with very satisfactory results. The staple, or chemical constitution of each soil, is altered and improved by the admixture, and it is thought that another advantage, equal if not greater, arises from thus covering up the vegetable matter of the sward on the land so dressed. There are some fields on the farm which are not conveniently located to plow, plant and till, and on these it is found that by spreading a thin covering upon the surface, a good deal of the vegetable matter of the old sward is rotted, the binding out of the grasses remedied, a new and far more vigorous vegetation starts up through the covering, and the productiveness of the land is much increased. Judge Hayes would confidently recommend this practice as deserving of attention. The work is done at odd jobs, as spare time may be found; usually after haying, and until late in the fall.

To me, this is quite an interesting matter. My attention was first called to it by an operation of the kind which occurred on my land, without my instrumentality, and at the time, against my wishes. A temporary, but quite powerful stream of water was suddenly formed, and came pitching over a sand bank, bringing the sand along with it, and distributing it over an acre or more, from one to two or three inches thick. The land, a fertile brown loam, had never been plowed, and the grass had formed a very thick and tight-bound sward In so far as the covering was concerned, it was composed of a coarse sand, and I have no idea, to this day that it was possessed of fertilizing properties in itself I regarded it with much suspicion, as it lay spread over my grass-plat. It was suffered to remain through the season, however, and contrary to my expectations, a new and most vigorous vegetation started up through the covering, with which I was well pleased. There was more value in grass upon the patch, for four years following, than I had before seen upon it. A portion of the sand, where it first struck the field, was a foot thick, and remained entirely barren of herbage, and it became necessary to scrape it off. The reader may at once say that a covering thus brought on by a stream, has more or less of fertilizing properties mixed with it, and no doubt this is quite generally the case; but my observation has frequently been attracted to similar occurrences, with like results, where nothing but coarse sand or gravel could be detected. Probably, the true reason for the improved vegetation, is, that it is supplied abundantly with the elements of a new and more vigorous growth by the decaying vegetable matter of the sod thus covered, and the land is relieved for a time from its former turf-bound condition.

IMPROVEMENT OF PASTURES.—Judge Hayes' management of his pastures is most excellent, and worthy of particular consideration. A few of the pasture-fields are used occasionally for mowing and tillage, and some of the mowings as pastures; and he finds advantage in the practice. All the pastures are plowed as often as once in 6 or 7 years. As large a tract as his time allows, is turned over each year. The ground is carefully plowed at the most convenient time after haying, and the field rolled. Early in the spring—generally upon a late " sugar snow," as farmers say—a variety of grass seeds are sown, together with rye, and the field is left in common with the rest of the pasture, the rye furnishing considerable feed for the cattle while the young grass is getting root.. The moss, grass, small bushes, ferns and droppings of the cattle, are thus turned under to decompose and furnish food for the new seeding. A new surface is brought to day, to be renewed by atmospheric influences; the decomposing sod underneath renders the land light and friable; thus permitting the roots of the new plants to expand and penetrate the soil in every direction. For 4 or 5 years after, a better quality of grass, flourishing in a more robust life, has possession of the soil; and the pastures steadily improve under the management. Judge Hayes would confidently recommend the practice to favorable consideration, where the pastures can be plowed and the farmer has not a surplus of manure to apply to them.

Although some of the pasture-land is somewhat uneven in surface, he has not found it to be injured by washing, from being plowed. He is always particularly careful to run the furrows across, or at right angles with the slope of the hill, which prevents injury from heavy rains.

About twenty years ago, Judge Hayes purchased a pasture of 60 or 70 acres, a mile or two back, for the sum of $500. It was not very valuable land, and was thought to be high at that price. He commenced improving it by an occasional plowing and re-seeding in the manner described, and I think he informed me that about all of it had been gone over in this way, 3 times. An opportunity occurring to purchase a pasture nearer home, induced him to sell this. He obtained $1200 for it; and thinks it was cheaper to the purchaser at that price than it was to him, at the time of his purchase; the increased productiveness mainly making the difference.

Much light is thrown upon the efficacy of Judge H.'s various methods for the improvement of grass-lands, by the remarks of Prof. Johnston, in his " Lectures on Agricultural Chemistry,"—a work which the practical farmer may read with much pleasure and profit. After speaking of enriching exhausted lands by plowing in green crops, the Professor says:—

" There is another mode in which recent vegetable matter is employed in nature for the purpose of enriching the soil. The natural grasses grow and die upon a meadow or pasture field, and though that which is above the surface may be mowed for hay, or cropped by cattle, yet the roots remain and gradually add to the quantity of vegeteble matter beneath. If the quantity of organic (vegetable) matter which these roots contain, be greater than that which the crop we carry off has derived from the soil, then instead of exhausting, the growth of this crop will actually enrich the soil in so far as the presence of organic matter is concerned. No crops, perhaps, *the whole product of which is carried off the field*, leave a sufficient mass of roots behind them to effect this end, but many plants, when in whole or in part eaten upon the field, leave enough in the soil materially to improve the condition of the land—while in all cases those are considered as the least exhausting to which are naturally attached the largest weight of roots. Hence, the main reason why poor lands are so much benefited by being laid down to grass, and why an intermediate crop of clover is often as beneficial to the after crop of grain, as if the land had lain in naked fallow."

" An interesting series of experiments on the relative weights of the roots, and of the leaves and stems of various grasses, made by Hlubek," is given. " The beds were grown in beds of equal size (180 square ft.) in the agricultural garden at Layback, and mown on the fourth year after sowing, just as they were coming into flower. The roots were then carefully taken up, *washed, and dried*." I have not room for the details, but it appears that,—" If we take the mean of all the grasses experimented on, as an average of what we may fairly expect in a grass field—then *the amount of living roots left in the soil when a four-year-old grass field is plowed up, will be equal to one sixth more than the weight of that year's crop*."

" A mixture of white clover, of ribwort, of hoary plaintain, and of couch-grass, in an old pasture field, gave 400 lbs. of dry roots to 100 lbs. of hay—and in a clover field, at the end of the second year, there were 56 lbs. of dry roots to every 100 lbs. of clover hay, which had been carried off. In an old pasture or meadow field again, when plowed up, *the living roots left are equal to four times the weight of that year's hay crop*. In the case of clover, at the end of she second year, the quantity of dry vegetable matter left in the form of roots, is equal to upwards of one-half the weight of the whole hay which the clover has yielded. Suppose there be three cuttings, (one in the first and two in the second year) yielding four tons of hay, then *two tons of dry vegetable matter are added to the soil in the form of roots, when the clover stubble is plowed up*."

" This burying of recent vegetable matter in the soil, in the form of living and dead roots of plants, is one of those important ameliorating operations of nature, which is always to some extent going on, whereever vegetation proceeds. It is one by which the practical man is often benefited unawares, and of which—too often without understanding the source from whence the advantage comes—he systematically avails himself of some of the most skilful steps he takes with a view to the improvement of his land."

IMPROVEMENT OF WET LANDS.—One of the best specimens of systematic and profitable husbandry within my knowledge, may be found upon Judge Hayes' bog-meadow. He has some 60 to 70 acres, in one body, which he has been steadily reclaiming, for about twenty years past. A portion of it had been cleared and mowed as sour meadow, for a period of nearly 200 years. It is of oblong shape, and of quite uniform width, surrounded on all sides by gradually rising uplands. It had, therefore, no natural outlet, and all the water flowing in from springs in the surrounding uplands, remained in the soil, making it sour, cold and and boggy, without being sufficiently abundant to form a pond upon the surface. The muck, or peat, upon the outer sides, is from two to three feet deep, gradually lessening towards the centre, where it is from six to twelve inches deep,—the whole resting upon a clay bottom. The increased depth of the muck on the margins, is owing to the greater wetness of the land, arising from the in-flowing springs. This induced a greater growth of swamp plants, as rushes, reeds, mosses, ferns, &c., whose annual partial decomposition, in successive layers, formed an accumulation of vegetable matter greater than that nearer the centre, where the moisture was less.

Allow me to introduce, in this place, an extract from that excellent work, "Low's Elements of Practical Agriculture," which gives a very concise and satisfactory account of the formation of this kind of soil:—

"Peat consists of vegetable matter which has undergone a peculiar change. Under a degree of temperature not sufficiently great to decompose the plants that have sprung up upon the surface, these plants accumulate; and aided by a certain degree of humidity, are converted into peat, which is either found in strata upon the surface of plains, or accumulated in great beds on the tops and acclivities of mountains, or in valleys, hollows and ravines. Successive layers of plants being added to the mass, it continues to increase, under circumstances favorable to its production. Water is a necessary agent in its formation, and we may believe, too, a peculiar temperature, since it is only in the cold and temperate, and not in the warmer regions of the earth, that it is found to be produced. The plants which form it have not entirely decayed, but still retain their fibrous texture; and from the action of certain natural agents, have acquired properties altogether distinct from those which, in their former condition, they were possessed of. They have now formed a spongy, elastic inflammable body, and so different from the common matter of vegetables as to be highly antiseptic.

"The plants whose progress towards decomposition has been thus arrested, are very various. Over the greater part of the surface of the primary and transition districts of colder countries, the peat is chiefly formed of cryptogamic plants, mixed with the heaths and other plants which had grown along with it. Sometimes the peat has been found in swamps and lakes, and at other times the humidity of the climate has been sufficient to form it in one continued bed, covering the whole surface of the country."

The first object in attempting the drainage and improvement of this meadow, was to surround it with a main ditch, 3 feet wide and 3 deep, thus cutting off all the springs flowing in from the uplands. The water was all collected into one channel at one end of the meadow, and conducted off the field through a cut made in the upland, which at this point is less elevated than elsewhere, and after going a short distance, a sufficient natural descent was found to dispose of it without farther digging. Two cross ditches, at right angles to the marginal ones, and two rods apart, were then opened, 15 to 18 inches deep, and 2½ feet wide on top, by 18 inches at the bottom. This gave a sufficient slope to the sides to prevent their caving in and filling up the ditches. The mud taken from them was scattered over the surface between. Two lands of two rods wide, each, were thus made containing about four acres. The hassocks and bushes were then cut and rooted out, and before the frost heaves the ground in the spring, the land was covered with one hundred loads per acre, of a fine, yellow, micaceous subsoil, obtained from the adjoining upland. This fine gravel in a measure combines with and neutralizes the acid properties existing in the surface soil; and the mosses and other wild coarse herbage covered up, are decomposed. The covering was immediately spread, a light dressing of compost—made of manure and loam, in about equal parts, with the addition of lime,—was applied, the whole thoroughly harrowed, and clover and herds-grass seeds thickly sown and bushed in.

Although, with Judge Hayes' ample means, this meadow might all have been reclaimed before this time, he has yet preferred to conduct his operations in this department, as he always has done in all his farming, by proceeding with a small piece, and a moderate and judicious expenditure annually. He has constantly been working up towards the bushes, by taking up each year one land of two rods wide, from its wild and wet state, and converting it into productive mowing in the manner described. The year previous to taking up a new land, the cross ditches are cut, which renders it drier, and facilitates the operations which are to follow. All the necessary bridges for crossing these ditches with teams are built of stone, it being deemed the cheapest mode of construction, in the long run.

For the first four or five years, these reclaimed lands invariably produce from 2 to 3 tons of good hay per acre. In five or six years, they need the operation of plowing, manuring and reseeding. The plowing is usually done in August or September, by 'back-furrowing,' as it is commonly called, and the ditches are then dug and smoothed off, scattering the mud over the surface between. Late in the fall, 10 to 15 loads per acre of fine compost are evenly spread over the surface, the ground harrowed until it becomes perfectly fine and mellow, and then rolled. It is thus well prepared for a new seeding, which is done the following spring, upon a late snow. The lowlands and pastures are invariably sown with grass seeds at this season, it being found, after a trial of all ways, the surest time to secure a good "catch" of grass.

Over thirty acres are now reclaimed by this course of management. Judge Hayes doubts not but covered stone drains would be better than open ditches, as they would simply conduct off the water underneath without that loss of surface wash, which is always, to some extent, experienced with open ditches. He has concluded, however, that it will be fully his part to place this land in a state of productiveness and profit in the way he is proceeding; leaving it to those who come after him to perfect the drainage.

As I stood in the midst of this meadow, viewing with much delight the improvement which the hand of skill and perseverance had made, I could not but feel that here had been so much solid wealth added to the country. A gloomy and impassable morass, filled with worthless bushes and wild, noxious herbage, had been converted into a most verdant meadow, covered with an exuberance of fresh valuable grasses. And what added particularly to the pleasure of the prospect, was the fact that the investment had been so gradually and advantageously made, that any enterprising and sensible farmer in the vicinity might do the same.

There is quite a general spirit of improvement in progress among the farmers of New-England, in many branches of their business; but improvements by draining and reclaiming wet lands are by no means as general as they might advantageously be. These lands, when made dry, are the most productive in grass of any; and they require much less manure to keep them so, than is necessary to bring our worn-out uplands into any thing like the same productiveness. I would, therefore, confidently urge my brother farmers to attempt the redemption of their wet lands.

In conclusion, I have to remark, that the great fundamental idea in Judge Hayes' farming has been to make his lands, of every description, yield good crops annually;—not to be followed by exhaustion, but by constantly increasing production. Here lies the secret of good husbandry. The eventual success of our farmers must ordinarily depend upon adopting a mode of culture, which, while securing good present crops, has also in view the future condition of the soil;—a condition of gradual and steady improvement.

Brattleboro', Vt. Jan. 16, 1849. F. HOLBROOK.

History of Kentucky Cattle.

Letter from Lewis Sanders, Esq.

[The author of the following communication, is well known as a gentleman of much experience and extensive observation in regard to live stock. It was through his enterprise that the cattle were introduced which have been so widely celebrated as "the importation of 1817." Knowing his ability to impart valuable information relative to the success of the different breeds of cattle in Kentucky, we took the liberty of propounding to him several questions, to which he has not only very fully replied himself, but has obtained, also, answers to the same questions from another very intelligent gentleman, Dr. S. D. MARTIN, of Colbyville, Ky. On account of the length of the article we are under the necessity of deferring the publication of the letter of Dr. M. till next month. In the mean time we would tender our most respectful thanks to both of these gentlemen, for their interesting and valuable contributions.—EDS.]

The first emigration to Kentucky,—the "*dark and bloody ground*," the hunting grounds of the Southern and of the Northern Indians,—with the view of permanent occupancy, of holding the country at all hazards, by men determined to overcome the tomahawk and scalping knife, by the use of the rifle, took place in 1775—6. The country then belonged to Virginia; a large proportion of the first settlers were from that state; next from Pennsylvania, then N. Carolina, Maryland, New-Jersey, &c. It is presumed that the emigrants brought with them domestic animals, such as were then in common use. H. Marshall, speaking of Gen'l. Ben. Logan, in his history of Kentucky, vol. 1, says, "in the fall of the year 1775, Col. Logan removed his cattle and the remainder of his slaves to his camp," (near where Danville now stands.) Horses and cattle were subsisted in the summer, in the *range*, consisting of a great variety of nutritive native grasses, including the buffalo clover, and the wild pea vines, luxuriant beyond description; and in the winter, in the *cane brakes*.

It seems to me that the general characteristics of the cattle of the United States, at the commencement of the present century, were very similar to those of Devonshire, Dorsetshire and Somersetshire, in England, as represented in prints of cattle in those counties in the last century. I have observed the cattle of Virginia, Maryland, Pennsylvania, New Jersey, New-York, and the New England states; they seem to have had a common origin.

The first improvement in the breed of cattle in Kentucky was made by Mr. Matthew Patton and his family, to whom the country is much indebted for the introduction of several valuable animals. A historical account of them is given by Dr. S. D. Martin, a highly intelligent and sprited agriculturist of Clarke county, in this state, which is herewith forwarded as a part of this communication.

Judge Beatty, in his very valuable ESSAYS ON PRACTICAL AGRICULTURE, (a book I recommend to all beginners to own,) treats on this subject.[*] These two papers, combine all the evidence it is thought that can now be obtained relative to the Patton cattle.

I have heard it estimated that the introduction of the Patton cattle increased the weight of the four year-old bullocks, twenty-five to thirty per cent, besides improving the quantity and quality of the milk. This was a great gain.

The next marked improvement in the breed of cattle, was brought about by the importation of some animals direct from England in 1817. At that period and for many years previously, I lived in Lexington. My pursuits were otherwise directed, than to agriculture; but I had early imbibed a fondness for fine stock, particularly horses and cattle. I admired good fruits, and gave some attention to their culture. For several years I was in receipt of a variety of English publications, on agricultural subjects and agricultural improvements, from which I got a glance of what was going on, in some respects, in the old country. It astonished me greatly, to see the enormous prices paid for animals of particular breeds. . First, the Long-horns, brought to a high state of perfection by the justly celebrated Bakewell, Princep, Munday and Fowler. Towards the close the last century, they were at the height of their popularity. Mr. Princep refused five hundred guineas for a two year old bull of this breed. He was offered one hundred pounds each ($485) for twenty dairy cows. He refused to let his best bulls go to his neighbors' cows, for thirty guineas the cow. At this period, 1789, the circulating medium was *gold*. The bank did not suspend specie payments until 1797. Mr. Fowler refused five hundred guineas for ten bull calves of the same breed, and let his bulls out for the season (1st of April to the 1st of August,) for from £60 to £80.

Much time was required, combining capital, skill and untiring perseverance, to bring this breed to such a high state of perfection. Notwithstanding all this, it was suffered to run out, almost to disappear in the course of a few years. About the time that the Long-Horns were held in such high estimation, commenced the improvement of the Short Horns. Skillful breeders, with Charles Colling at their head, brought this breed to a very high state of perfection. Their value was at the height in 1810. In this year a public sale took place. The list of animals sold, and the very high prices paid for each, has been often published. Countess, out of Lady, four years old, brought four hundred guineas; Comet, six years old, brought one thousand guineas. He was bought by four farmers.

It seemed to me, that if four farmers were willing to pay five thousand dollars for a bull, there was a value in that breed that we were unapprised of, and that I would endeavor to procure it. I made up an order for six bulls and six cows. My views were then more inclined for a good milking than for a beef breed. The weight of authorities, given by the writers on the subject of cattle, at the close of the last, and the commencement of the present century, were in favor of the *Holderness* breed as the best for milk, and the *Teeswater and Durham* as having the handsomest and most perfect forms. I settled on these breeds. In frequent conversations with Capt. Wm. Smith, about the contemplated importation, he strongly urged me to include the *Long Horns*; he had witnessed the marked improvement made by the use of old Mr. Patton's first Long Horn bull, and he was extremely anxious to have a bull of that breed. I had great respect for him as a man, and confiding in his judgment, two pairs of the Long Horns were added to the list. The order was forwarded in the fall of the year 1816, to Buchanan, Smith & Co., Liverpool, with instructions to cause selections to be made of the best young animals for breeders, all to be two years old in the following spring.

First, a bull and heifer of the Holderness breed, to be procured from that district in Yorkshire. Next, two bulls and two heifers of the Teeswater breed, to be pro-

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The remarks referred to, though interesting, are omitted, as the principal facts are embraced in the articles of Mr. Sanders and Dr. Martin.—EDS.

cured on the River Tees, in the county of Durham. Then a bull and heifer of the Durham breed, and two bulls and two heifers of the Long-Horn breed. A minute description was given, particularising each breed,—no limit as to price. If the money sent, was not sufficient to put that number on board ship; they were to be reduced, so as to have the best animals that could be had for breeders.

Buchanan, Smith & Co., employed Mr. Etches of Liverpool, to go into the different districts to make the selections and purchases, and he seems to have executed the order with much ability. The following is the invoice:

Cattle shipped on board the Mohawk for Baltimore, consigned to Messrs. Rollins & McBlair, merchants there.

No. 1. A bull from Mr. Clement, Winston, on the river Tees, got by Mr. Constable's bull, brother to Comet.

2. A bull of the Holderness breed, of Mr. Scott, out of a cow that gave 34 quarts of milk por day—large breed.

3. A bull from Mr. Reed, Westholm, by his own old bull.

4. A bull of the Holderness breed from Mr. Humphreys, got by Mr. Wase's bull, of Ingleton.

5. A bull of the Long Horn breed, from Mr. Jackson Kendall, out of a cow that won the premium.

6. A bull of the Long Horn breed, from Mr. Ewartson, of Crosby Hall—is of a very fat breed.

7. A heifer from Mr. Wilson, Staindrop, Durham breed.

8, 9, 10. Three heifers from Mr. Shipman, on the river Tees—his own breed.

11, 12. Two heifers of the Long Horned breed, from Mr. Ewartson, Crosby Hall—of Westmoreland breed.

The Mohawk arrived in Baltimore, in May, 1817. The cattle were safely landed, in good condition. Great pains had been taken, in procuring comfortable accommodations for them in the ship, and, an experienced herdsman employed to feed and take care of them on the voyage. On arrival, they were taken in charge by my friend, Mr. John Hollins, who caused them to be put in the best pasture, and particularly cared for.

After the cattle had been shipped, and before their arrival at Baltimore, I sold to Capt. Wm. Smith, one-third of the concern, and to Dr. Wm. H. Tegarden another third; reserving to myself one-third only. A suitable agent was sent to Baltimore for them, and they were brought to Kentucky at the joint risk and expense of the three parties. On their arrival at Lexington, they were divided.

There fell to my lot, bull
No. 1. which I named Teeumseh.
No. 2. named San Martin.
No. 8. " Mrs Motte.
No. 10. " Georgiann.
Capt. Smith's lot:
Bull No. 5. which he named Bright.
7. " " the Durham cow.
9. " " Teeswater cow.
Dr. Tegarden's lot:
Bull No. 4. which he named Comet.
" 6. " " Rising Sun.
12. Long Horn Cow.

No. 10 died in Maryland, No. 3 (bull) became lame on the travel out to Kentucky, and was left on the way. He was afterwards received, and sold by the company, to Capt. Fowler, who sold him to Gen. Fletcher, of Bath county, Kentucky, where he died.

When the division took place, Capt. Smith evinced great anxiety to own the largest Long-Horn bull; Dr. Tegarden preferred No. 4, and, as neither of them were my favorites, I cheerfully yielded; and in consequence, they gave me choice of the cows. I selected one of the Teeswater Heifers and named her Mrs. Motte. It was a very pleasing occurrence to have each party highly gratified, with receiving the very animals he preferred.

The narrative of a pertinent coincident, will not, I think, be deemed ill-placed.

Mr. H. Clay, being in England in 1816, having always had fondness for fine horses and for other fine stock, concluded to send home some fine cattle. At this time, the Herefords were great favorites at Smithfield. Either from Mr. Clay's own taste, or from the recommendation of others, he selected that stock, purchased a cow, a young bull and heifer of that breed, and sent them to Liverpool, to be shipped to the United States. It so happened that they were put on board the Mohawk, the same ship with my cattle, and they arrived together at Baltimore, were there placed in the same pasture, and the agent that was sent for my cattle, brought out Mr. Clay's to Kentucky.

Although Mr. C. and myself, at that period, resided in the same city, and had always been personal and political friends, from the time of his coming to Kentucky, in 1798, till March, 1825, and our social and personal relations have been unchanged for fifty years—yet neither Mr. C. or myself had the slightest knowledge or intimation, of the intention or views of the other, in regard to *importing foreign cattle.*

Mr. Clay at one time, had a good stock of horses. He bred the dam of Woodpecker, one of our best race horses, and he proved to be a good stallion. His flock of sheep were celebrated for the fineness of their fleece.

But having introduced the Herefords, I may as well finish them.

At this time, (1817) Mr. Isaac Cunningham owned the largest and best grass-farm in Kentucky—the identical farm settled by old Mr. Matthew Patton, the father of the Patton family, who introduced the Patton cattle. Mr. C. was wealthy, had a good stock of Patton cows, and had been in the habit of selling his young ones for breeders. Mr. Clay's good judgment, led him to place his *Herefords* in the hands of Mr. Cunningham; notwithstanding all these advantages, the Herefords made no impression; in a very few years they were unknown as a breed in Kentucky, and at this day, a part blooded one is rarely to be met with.

As to the Long Horns, although there were two bulls and two cows imported, the breed has nearly run out. Capt. Smith kept them up for a while, but as he died soon after they were introduced, his stock was neglected. The Rising Sun left a good stock in Clarke and Bourbon counties, and for a while they were very popular with the feeders in those counties; but they have gradually yielded to the Short Horns. A mixture of Long-Horn blood, in a remote degree, is deemed by many feeders of great value, (and that is my opinion.) The hide is thick, the hair is long, and very closely set; they are of very hardy constitution, well adapting them to *our* mode of feeding. Cattle are not housed or sheltered, but fed out in the fields, taking the weather as it comes. The Short Horns have thin hides, fine short hair, and do not stand exposure to the weather so well.

The importation of 1817, (alluding to which it seems that the Long Horns and the Herefords, are to be omitted,) gradually gained favor with the feeders and breeders. The young ones were much sought for throughout Kentucky, and parts of Ohio, and were all sold for breeders. *Tecumseh* and *San Martin* were the principal instruments used in effecting this great improvement. Mrs. Motte, the Durham cow, and the Teeswater cow, were excellent breeders. The Durham cow was equal to the best milk cow I ever saw. Napoleon was her best bull calf. Mrs. Motte was the neatest, the finest animal of the importation.

A year or two previous to 1831, I observed that my young cattle were not up to the mark of improvement that I wished to see progressing, but were rather falling back. The only remedy that I then thought, and still believe necessary to arrest this downward tendency and to give a fair prospect of improvement, was the *introduction of remote blood.*

Col. John Hare Powell of Philadelphia, imported a number of animals of the improved Short Horn breed, several years subsequent to 1817. He ordered his selections from the best herds in England, with great particularity as to pedigree, form and milking qualities, and without stint as to price. My attention was directed to this stock, to procure a cross on the Short Horns of 1817.

In the spring of the year 1831, I procured of Mr. Barnitz, of York, Pennsylvania, a young bull and three young cows of Col. Powell's stock. In several points, their forms were better than those of 1817. The cross was very beneficial to me.

Some few years afterwards, David Sutton of Lexington, introduced several animals of Col. Powell's stock.

Then other gentlemen imported cattle from Philadelphia, and from other parts of the United States and from England; so that we had a number of bulls and cows of the best known breeds in England and in the United States. From this basis, intelligent gentlemen, with abundant capital and great skill, have continued to improve, by judicious crossing, until we have arrived at a high state of perfection, as to *form* and *early disposition* to take on *fat*, points most desired of all others by the grazier and the feeder.

Notwithstanding that Col. Powell's stock were drawn from the best milking families in England, their descendants did not prove with us to be as good milkers as the stock of 1817, nor were they so healthy.

The dairy is but a secondary consideration with a Kentucky farmer—beef is more profitable, and as the great object of all pursuits is *money*, the one putting most in the purse will be pursued. For a dairy of cows where there is a demand, selling milk is most profitable —next cheese, if the climate suits; last, making butter. A Kentucky farmer in general, has no demand for milk. Cheese can be made here as well as any where else, but it costs too much labor to save it. Some writers say that it ought not to be relied on as a business, south of 40°. Butter could be made, of the best quality, and in quantities, but it seems that the farmers prefer taking only as much milk from the cows as supplies their families with milk and butter, giving the remainder to the calves. From these considerations it would seem that the *breed* of cattle bringing most money from the butcher at two and three years old, will have the preference with the grazier and the feeder, they using nine-tenths of the cattle bred in the state.

It will be seen from what has been stated, that great attention has been given to the breeding of cattle in this state for more than fifty years, and the course pursued has been to procure the best known breeds to cross with; so that we now have an excellent breed for the grazier and for the feeder—forms approaching near and nearer to perfection, and an aptitude to take on fat at an early age. But in obtaining these grand objects, *perfect forms* and *early maturity*, so much desired by the grazier and the feeder, we have *sacrificed*, mainly, the *milking qualities*.

"Whatever be the breed, there are certain conformations which are indispensible to the thriving and valuable ox or cow. If there is one part of the frame, the form of which, more than of an other, renders the animal valuable, it is the *chest*. There must be room enough for the heart to beat, and the lungs to play, or sufficient blood for the purposes of nutriment and of strength will not be circulated—nor will it thoroughly undergo that vital change which is essential to the proper discharge of every function. Look, therefore, first of all, to the wide and deep girth about the heart and lungs; we must have both. The proportion in which the one or the other may preponderate, may depend on the service we require from the animal; we can excuse a slight degree of flatness of the sides, for he will be lighter in the fore hand, and more active; but the grazier must have *breadth* as well as *depth*. And not only about the heart and lungs, but over the whole of the ribs must we have both length and roundness—the *hooped* as well as the deep barrel is essential; there must be room for the capacious paunch, room for the materials from which the blood is to be provided. The beast should also be ribbed home; there should be little space between the ribs and the hips. This seems to be indispensible in the ox, as it regards a good healthy constitution, and a propensity to fatten; but a largeness and drooping of the belly, is excusable in a cow, or rather, notwithstanding it diminishes the beauty of the animal, it leaves room for the udder; and if it is also accompanied by swelling milk veins, it generally indicates her value in the dairy."

The introduction of the Patton stock into Kentucky, effected as much benefit to us in the improvement of our cattle, in a little more than twenty, as was effected in England in more than *sixty years*.

A printed report of a select committee of the House of Commons, in 1795, stated that cattle and sheep had increased on an average, in size and weight, about a fourth since 1732.

The average weight of cattle slaughtered for the London market in 1830, was 656 lbs. [McCullough's Dictionary of Com.]

At Liverpool, about the same period,

600 Irish beasts, averaged,	....	720 lbs.
140 English do.	....	730 "
60 Scotch do.	....	610 "

It would seem that our improved breeds exceed these weights. Twenty fat cows were sold in the early part of this month, by one drover, at Cincinnati, the average weight of which was over one thousand pounds, the four quarters. These cows were Kentucky bred. All but three had produced calves.

I expected to receive authentic data, to state the average *age* and *weight* of the *four quarters* of cattle slaughtered at Louisville, and at Cincinnati, for three periods. Though promised, the paper has not yet come to hand.

In 1833, I took to New Orleans three bullocks, produced by a cross of the cows of the Patton and Miller stock, by bulls of the importation of 1817.

No. 1. Red, 6 yrs. old, live weight, ...	3448 lbs.
2. " same age, ...	3274
3. Brindle, 4 yrs. old, ...	2868

I sold these three animals together, at auction, for the sum of nine hundred and twenty-five dollars.

I was at the New-York State Agricultural exhibition at Saratoga, in September, 1847. I very attentively examined the cattle stock there shown. The oxen were better than are generally to be met with in Kentucky; all others not so good.*

The Ayrshire cattle may be classed with our half-blooded Durhams, from common cows.

We can derive no benefit from a cross of Devon blood.

The diminutive size, and ill-forms of the Alderneys, would exclude them from our pastures.

Our climate is favorable for breeding and rearing cattle. They are free from any marked disease. I have never known an epidemic among them.

It is the custom with some farmers, as soon as the corn is in the roasting ear, to cut it up, giving stalk and all to hogs. The hogs masticate the stalk—suck and swallow all the juice, throwing out the remaining fibrous matter, which soon becomes dry. Cattle are very fond of this refuse stuff; but when taken in quantities, it causes a derangement of the maniplus, for which no remedy has as yet been discovered. At first the animal becomes restless, and is feverish. Soon after it begins to rub its head down and up a post, or any thing it can rub against—manifesting the greatest pain and misery. It continues rubbing until it dies. [We suppose this to be what is called the "mad itch."—Eds.] I have seen several so affected, and after the rubbing commenced, I never knew of one that was cured. Upon opening the animal, it is found that the maniplus is entirely deranged, dry and hard, mortification having in some instances already commenced. The only remedy, is to keep your cattle from the place where green corn stalks have been fed to hogs.

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* The show of cattle at Saratoga was inferior to any ever held by the N. Y. State Ag. Soc., and should not be taken as a fair representation of the character of the stock of the State. EDS.

Cattle of Ohio and Indiana are not so healthy as are the cattle of Kentucky. I was told by a Cincinnati butcher, who supplies with beef a portion of the Jews of that city, that he was compelled to procure his cattle for these people from Kentucky. The *Priest* sticks the animal, which is dressed in his presence by the butcher. Upon opening the animal, if any imperfection of the intestines is visible, such as blisters on the liver, &c., the Priest remarks, "this one may do for the Christians, but will not do for the Jews—you must bring up another."—The cattle of Kentucky have no blemish; the intestines are in a perfectly healthy condition; so we, only, can supply the Cincinnati Jews with beef.

I was informed by Dr. Watts of Chilicothe, a gentleman of intelligence and great enterprise, who feeds and grazes on a large scale, that he would pay five per cent. more for Kentucky raised cattle for either purpose, than he would for Ohio or Indiana cattle. He considered the risk of life that per cent. in favor of the cattle of Kentucky.

There are three epochs in the history of Kentucky cattle: First, the introduction of the Patton cattle, say in the year 1790, and some years afterwards, the Miller stock of the like blood. These were generally diffused throughout the State, improving our stock twenty-five to thirty per cent, in a period of 25 years.

Second. The importation of 1817, which gave us finer forms and an aptitude to take on fat at an earlier age, adding twenty-five to thirty per cent. upon the Patton improvement, in a period of less than 20 years.

Third. The numerous importations made into Kentucky and into Ohio, from 1831 to 1836, from which has arisen our present superior breed. To keep up this breed as it now is, requires sound judgment and unceasing vigilance, or a decline must follow.

I recommend to the breeders in Kentucky, to import at least half a dozen young bulls from the Netherlands, Holland, or Northern Germany, at once,—and renew such an importation every five or six years, for twenty years. Then to draw their young bulls from the best stocks to be found in England.

I do not think it is desirable to have a very large breed; but *form* and *early maturity*, are not for a moment to be lost sight of. A skillful breeder endeavors to shape the animal, so as to carry most flesh on the valuable points, to have the *loin and hind quarters* much the heaviest, as these parts bring to the butcher the most money.

Grass Hills, Ky., Dec. 1848. LEWIS SANDERS.

PREVENTION OF SMUT IN WHEAT.—A simple and perhaps the most effectual mode of preventing smut in wheat, is to mix with the seed grain a solution of blue vitriol—sulphate of copper—an ounce of vitriol for a bushel of wheat, or in that ratio. Turn the wheat on a floor, and pour on the solution of vitriol boiling hot—using a gallon of water to a bushel of wheat. Mix it by turning with a shovel several times. Let it lie in a heap over night, and if too damp to sow readily next morning, mix in enough air-slaked lime or plaster to dry it

Suggestions for Farmers.

System, Order, and Economy.

THESE may be esteemed essential virtues, and important to the welfare of mankind: they are, however, peculiarly indispensible to the agriculturist, to the farmer whether rich or poor, to secure and retain the comforts and conveniences of life. Without any endeavor to enforce this plain truth by argument, it may be useful to point out to farmers engaged like myself, in the endeavor to obtain from the soil, the *largest* product, at the least cost, some few of the methods, not yet in *general* use, though well established by the practical experience of many industrious and thrifty men.

As a working farmer, earning my bread by the cultivation of my farm, I do not pretend to claim any credit for unsupported opinions or private judgment; but desire to show and prove how much *profit* may be realised by a careful attention to system or method in farming, with order and neatness in its prosecution, thereby practicing true economy.

Preparatory, however, to the above object, it seems proper to consider some of the means by which the farmer can best arrive at system and order, and for that purpose, and to secure his full acquiescence in statements which may be set forth, certain *principles* must be admitted, or agreed on, long since well established, and we shall then arrive at conclusions with one mind —these principles are:

First—The cultivation of the earth must be accomplished, by the force of men, animals, wind, water or steam.

Second—Man can exert a force equal only to about one-sixth of the power of a horse; and can be more effective in *carrying* than in *drawing* a load; while the horse exerts more power and with greater effect in drawing, than in carrying a load or burthen.

The effective force of a horse is estimated as equal to that of six men, in labor performed from day to day.

Third—The expense of keeping a horse is about equivalent to the keep of one man per day.

Fourth—The power of man, when used without the application of his mind or intellect, degrades him in his own estimation, reducing him to a condition of servitude and dependance.

These truths being admitted, we cannot hesitate to adopt for our present purpose, a portion of the first, and say, that our farming operations in this country must be carried on by men and animals. But, as the force of one horse is equal to the force of six men, we *must* in preference use the power of the horse as most economical. Man, however, having intelligence, possesses in that faculty, a power of infinitely greater value than his physical force; he soon learns that his hand is a tool of wonderful contrivance, surpassing all others in utility, and the same intelligence quickly points out to him the existence of certain fixed powers or mechanical forces, which his hand may readily combine; and thus form for himself tools and machinery to effect any desired object, far exceeding in force or power, any effort of men or horses. It is by this increasing intelligence of the farmer, his seeking after knowledge, and by its application, that, within a comparatively short period, he has ascertained the most perfect means (by aid of machinery) to divide and break up his soil, no matter how tenacious or resisting; to reap his grain and grasses—to rake and collect them on the field, to house them in his capacious barns; to thresh and clean them for a ready and never failing market.

From this source he is now enabled to perform his work with greater truth and accuracy; he economizes time, he saves labor, and thereby enriches himself and his family.

These results of the farmer's intelligence, are made manifest by the several agricultural reports sent forth from the Patent office, as well as by the pages of *The Cultivator* and other valuable agricultural periodicals. As, however, the use of machinery in farming has not yet been sufficiently extended to make its benefits known to our farming interest—it is proposed, as opportunity offers, to bring these objects more minutely to their notice, and endeavor clearly to prove their profits and advantages, as closely connected with System, Order and Economy.

I have proposed above, to consider some of the means or machinery, by which the farmer can best arrive at system and order, with economy. Certain principles have been laid down, which it is believed are too well established to admit of doubt.

In this country, where agriculture takes the lead in importance, of all other professions, and where the government is more dependant on her farmers for its welfare, than on any other class of men; and where the immense tracts of public land are proffered to the industrious at a nominal value; manual agricultural labor must and will for years to come, be expensive. In this fact, we find a prominent exciting cause for the introduction of machinery, whereby one animal may be made to accomplish far more than the power of six men. And happy is it for us, that our native genius nearly keeps pace with the urgent demands for mechanical combinations.

We now have the Plow, Harrow, Cultivator, Seed-sower, Horse-rake, Reaper, Cart and Wagon—the Threshing machine, Clover mill, Fanning mill, and portable Grist mill, so constructed, as to be applicable to any and every farm, and to render the farmer independent of a large portion of the labor, which hitherto has been a grievous tax upon his products, and consumption of his time. To the foregoing, may advantageously be added in many places, the Hay, Straw and Stalk Cutter,—Corn and Cob Crusher, and the Circular saw, all of them used by the power of the horse.

The larger portion of these implements are *necessary* to the economic farmer, in greater or lesser quantity, according to the size of his farm.

It would be bold indeed to claim perfection for any of these farming machines, but the endeavor will be to test their economy, to show how they enable us to improve System, which will naturally lead us to do all things neatly and in Order.

The *Plow* is the first machine named, and has been so long in use, and undergone so many changes for the better, and prejudice does *yet* hold so fast of the minds of many in regard to some one favorite pattern, and as construction does not interfere with the object in view, no allusion is necessary to the several admirable forms of plow we have in use; nevertheless, I have so often witnessed the loss of time, imperfect work, and a consequent loss of crop to the farmer, by careless practices with this machine, that a few remarks will be applicable· Many farmers seem to view the plow as a common, unimportant implement, not requiring their special care and attention,—not knowing the amount of science that has from time to time been applied to its construction, in order to present the least resistance to their teams, and divide their soils in the most perfect manner.

That this is true, appears by the condition in which the plow is too often found after use—often left in the field, or on the road, exposed to the burning heats of summer, and to the frost, ice and snow of winter. How long will a good plow last, thus exposed? Not over two or three seasons, if so long; on the other hand, if the farmer had done his duty, and housed his plow *in clean* condition, and afforded to it one coat of paint during a leisure hour in the winter, his plow would last not less than six, eight or ten years, performing well its annual duty. There is no one implement on the farm more important than the plow, and none needs more skill in its proper adjustment and use; yet the absence of system, of order and economy, causes an expenditure for plows every two or three years, which might be prevented by attention to order, for three times that period. But this is not the only source of waste arising from this vicious carelessness. I have seen plows used, where the coulters were one-quarter of an inch broad, where the cutting edge should have been; preventing a clean cut, and increasing the labor of the horses—and the same difficulty is often experienced by the rusting of the mould board, which, by its roughness, holds the soil and impedes the plow, thus wasting time, and not unfrequently turning the plow from its course.

So also, as regards the harrow, much time is lost in bringing a field to proper tilth, by the exposure of this implement to the weather, instead of carefully preserving it, by cleaning, painting, and keeping the teeth sharp. It may not be easy to estimate with precision, in dollars and cents, the loss sustained from the foregoing causes, but from experience and observation, I think the difference *in results*, from work done with perfect and imperfect implements, may safely be estimated at one third. Now the cultivation of an acre of wheat costs about and not less than ten dollars, so that the careless farmer loses from this cause alone, $3.33 *per acre* on his wheat, a loss somewhat alarming, and sufficient, if saved, in one season, to afford a tool-room, and paint for years to come.

If we compare the loss of the incautious man, with the sound economy of the prudent farmer, upon a field of wheat of twenty acres, we find the latter has the advantage by $66.66 on the crop, besides other benefits which every thinking farmer can anticipate.

Here is a positive loss, encountered by too many farmers, by reason of want of system and order, which it is hoped will be avoided by all who may read these remarks, and find any applicability to themselves.

Before we consider the economy of the next implement on the list named by me, it may be well to say, that judgement in the *selection* of our proper tools and machinery is essential to economy, and to the due preparation of the soil for our seeds and plants; and it is here noticed, because we are frequently mortified and disappointed by the pertinacity and cupidity of men who peddle *imperfect* farming machines, tempting the unwary by presenting them at their very barn doors, pressing their use with importunate zeal. Oft times, when too late, the implement is found devoid of merit, or made of materials too imperfect to endure the severe service of the farm.

The plow is so important to us, that I must allude to it again in my next, in connexion with the harrow and cultivator. AGRICOLA. *Seneca Co., Feb.* 1849.

Farmers' Clubs.

EDS. CULTIVATOR—We are by nature calculated for sociability and society; hence the many associations which are formed. In an agricultural community, Farmers' Clubs are believed to be the most useful and appropriate associations that can be formed. The occupation of the farmer has too long been considered by many, as a dull stupid business, requiring but little learning or mental exertion; but the facts are entirely the reverse. His success depends upon the subtle and refined agencies of nature. To understand the principles which lie at the foundation, so that he can rely upon them, aided by their own exertion, to produce their natural effect, is a matter requiring great mental search and practical experience. Farmers have, by observa tion and practice, acquired more of this knowledge, and have done more to bring about the high state of civilization which we now enjoy, than they have credit for. Farming commenced at an early age. Those who first abandoned the shepherd state, cleared, fenced and cultivated their fields; built houses, established permanent residences, and owned and possessed their property individually, were the first who were fully entitled to the name of farmers. And as civilization cannot exist in a wilderness country, this may justly be considered, the first step towards civilization, with all its attendant benefits. And just so fast as agriculture has progressed; just so fast have arts, sciences and refinement progressed, and no faster. All have been dependent on the farmer for their food, and most of the raw materials with which they are clothed.

During this long process, the farmer must have acquired a great amount of information, founded on natural principles as well as practical experience. Still they have been contented with less scholastic education than those engaged in most other pursuits; and have not, like them, profited by keeping a journal or record of their operations. The merchant and manufacturer know from their books, the exact profits or loss, of all their operations; they know exactly, the advantage of every improvement, over the former practice; while the farmer, for the want of proper records, has to guess at all this. While one thinks he has made an improvement, another doubts it, and no one can determine with certainty. Important facts, it is true, have been obtained by scientific men; individuals too, have determined important facts by actual experiment; all which have been, and are continually published, and are doing much good. But from some cause, the great mass of common farmers are not profiting by these publications, as we could wish. It is believed, if they would form societies, keep a journal, and try the experiments for themselves, noting profit and loss, they would readily adopt the most useful improvements.

The formation of Farmers' Clubs, seems to be the most natural way, to cause the improvement made and published to be generally adopted; and to make improvements themselves. They could, by a small contribution from each member, purchase the latest works; also the journals as they are published, the reading of which would naturally beget a spirit of inquiry. Each would be anxious to possess as much information as his fellow. Thus a degree of useful competition would spring up, both as to the acquisition of knowledge and its practical application.

It is well known that farmers generally, are unwilling to put their ideas on paper. Many of us who learned to write a tolerable hand while at school, have paid so little attention to it since, as not to have acquired an easy business hand; or the ability to put our thoughts on paper intelligibly. This cannot be well done without some experience and practice. They should at least, be able to write intelligibly on matters relating to their occupation. To do this, the mind, as well as the hand, needs some training and practice. Whenever we make a tool or implement with our hand, we have the thing as it is, to look at; if it does not suit, we can try a second or third time, until we get it to answer the purpose. The same rule will apply to the putting our thoughts on paper; we cannot tell how they will read until we make the trial; and we should keep trying until we succeed tolerably well. This will do much towards training the mind to correct and systematic habits of thinking.

Let each member of the club, procure a good sized blank book; commence, say in the spring; write down all matters which relate to the operations of the farm, viz: Number of acres, the soil, manner of tillage, quantity and kind of manure; the time of seeding of all kinds of grain and vegetables, quantity of seed per acre; the situation of the land, as to wet or dry; making suitable entries during the season, as to the weather, the growth of crops, whether doing well or not, and the probable cause; the time of harvesting, yield per acre; if good or poor, the probable cause; the time of selling, the price, if high or low. A memorandum somewhat similar, as to the stock; the diseases with which they are attacked, if any, the remedy used; and the effect. Let an exact account be kept of the outgoes and incomes, and a balance be struck at the end of each year; taking special pains through the year to ascertain causes and their effects; and be not afraid of writing too much. By this course they would soon acquire the habit of putting their thoughts on paper in a systematic way. At the end of each year, these papers could be presented to the club, and examined by a committee; and all matters worth remembering, put into a condensed report, and recorded. By this course, a comparison could be made between the different systems practiced, and the best could be adopted. By this it is believed every important improvement would soon become general; errors would be detected and abandoned. Committees could be appointed to make tests and examinations on all important matters, and report. The presiding officer should make an annual address; the secretary could correspond with other societies; reports could be made to the county agricultural societies, and all matters of sufficient importance, published. All this being done by the farmers in their own way, would create a spirit of inquiry, and give them confidence in themselves, and tend much to the improvement of their mind as well as their farms.

Wherever such a society is formed and well sustained, we may expect to see in a very few years visible signs of improvement, in the cultivation of fields and gardens, the improvement of stock, in the planting and cultivating fruit and shade trees; in buildings, and in the general taste and neatness in all farming operations as well as an increase of profits. These may be looked upon as the natural consequence. The members would stimulate each other, an honorable and profitable competition would spring up; natural causes would be looked into, and their effects ascertained. Thus the farmer and the farm would go on improving together. FARMER. *Columbia, N. Y., Jan.*, 1849.

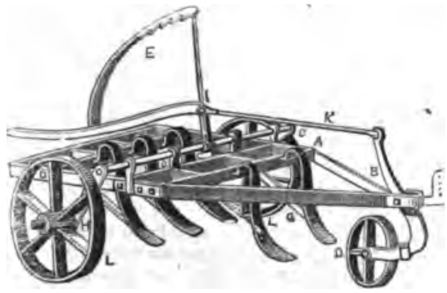
Agricultural Implements.

Extirpators or Scarifiers.

PERHAPS there is not a more serious defect in our husbandry, generally, than that which permits the growth and increase of noxious plants. In many instances a singular negligence is manifested in this respect; the soil becoming filled with weeds, thistles, and grasses, which greatly detract from the yield of cultivated crops.

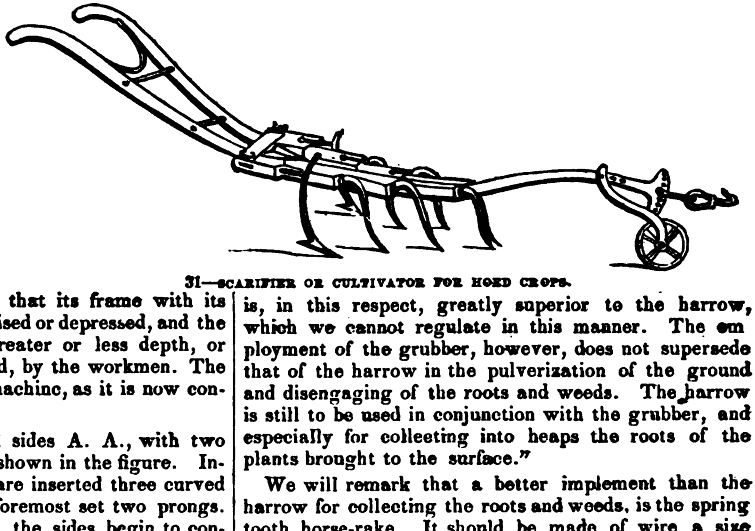
On common arable lands, the most injurious of these foul plants, is couch grass—*Triticum repens*. From its innumerable lateral roots, which extend in every direction, it completely overruns the soil, matting itself so firmly over the surface, that little chance is left for the growth of anything else. The implements commonly used, effect but little towards the eradication of this pernicious grass. If the ground is plowed, the sward is merely reversed; the roots, sprouting at every point, instantly send up new blades, and in a short time, the surface is as green as ever. The common harrow takes but little hold of it, and unless used in dry weather and in connexion with frequent plowings, only makes it grow faster. Such, also, is the effect of chopping it with the hoe, unless the operation is repeated so often as to prevent the top from acquiring any growth. An implement is wanted that will penetrate the ground to as great a depth at least, as it is moved by the plow, and which is at the same time calculated to thoroughly stir the soil and bring the fibrous roots to the surface.

Various kinds of extirpators or scarifiers are used by the English and Scotch farmers for cleaning the soil. Of this class of instruments, one called, from the name of the inventor, Finlayson's Scarifier or grubber, (fig. 30) has been extensively employed, and is, probably, as efficient as any in use. It is described by Prof. Low, in his *Practical Agriculture*, as follows:



30—SCARIFIER OR GRUBBER

' It is made wholly of malleable iron, and consists of a frame supported by wheels, and having inserted into it a certain number of curved teeth or prongs. It is so formed that the wheels can be raised or depressed, so that the frame can be brought nearer to the surface of the ground, or raised more above it, by which means, the prongs penetrate the soil to a greater or less depth. This instrument was originally formed with nine prongs in two rows, and required a power of four horses to work it. It has now been lessened in weight, and the number of prongs reduced to five, so that it can be readily worked by a pair of horses. It has further undergone certain modifications, so that its frame with its prongs can be more readily raised or depressed, and the prongs more easily set at a greater or less depth, or raised wholly out of the ground, by the workmen. The figure shows the form of the machine, as it is now constructed.



31—SCARIFIER OR CULTIVATOR FOR HOED CROPS.

" It consists of two parallel sides A. A., with two sets or pairs of cross-bars, as shown in the figure. Into the hindmost of these sets are inserted three curved teeth or prongs, and into the foremost set two prongs. From the foremost set of bars, the sides begin to converge, so as to meet at B., where there is a bent lever moveable on a bolt, and connected with the wheel D., which runs upon the surface. This lever is attached by a bolt to the rod K., and this rod again by a bolt at I. with the handle C. The handle is bent at the same bolt I., and connected at O. with the horizontal rod *c. c.*, by which means, when the handle is elevated or depressed, the rod *c. c.* is turned. This rod has an arm at each extremity, H., at right angles to it, which carry at their ends the hind-wheels L. L. Standing upon the frame, in the manner shown in the figure, is a curved bar, E., with a set of notches on one side, so that the handle, being raised or depressed, can be fixed at any given position. When the handle is depressed, the radial part O. is drawn back, and consequently the rod K.; and thus the wheel D. is pressed downward—the point of the frame B. rising in the same degree. Again, by the same depression of the handle, the rod *c.* is turned, and the arms H. P. are placed more vertical, and the wheels L. L. are lowered; or, in other words, the frame is raised. Thus the depression of the handle raises the whole frame with its prongs. Again, when the handle is elevated, the operation is reversed; the wheels are raised, and consequently the frame approaches nearer to the ground, and the prongs penetrate deeper. Thus, the prongs can be elevated or depressed at pleasure; and thus by fixing the handle in the notches at a greater or less height, the prongs work at a greater or less depth in the soil. By pressing the handle sufficiently down, the prongs can be raised entirely out of the ground, which is required when turning at the end of the ridges, or taking the machine from one place to another.

"The curvature given to the prongs is for the purpose of preventing any roots or other substances raised from the soil, from collecting and impeding the machine. They are supported by stays *a. a.*, and they cover a space of about 4 feet 4 inches.

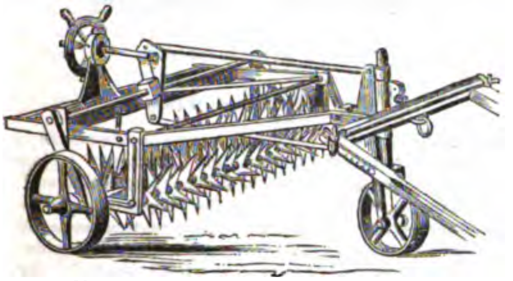
" The introduction of this class of instruments into tillage, must be regarded as beneficial and important. When land is full of root-weeds, the repeated operation of the plow, the harrow and the roller, is resorted to for tilling and cleaning it. In these cases the grubber is a useful assistant, and may frequently supercede the necessity of one or more plowings.

" The grubber can be made to go to any depth which may be required, and thus the soil can either be stirred to the depth at which it had been originally plowed, or to such lesser depth as may be deemed expedient. It is, in this respect, greatly superior to the harrow, which we cannot regulate in this manner. The employment of the grubber, however, does not supersede that of the harrow in the pulverization of the ground and disengaging of the roots and weeds. The harrow is still to be used in conjunction with the grubber, and especially for collecting into heaps the roots of the plants brought to the surface."

We will remark that a better implement than the harrow for collecting the roots and weeds, is the spring tooth horse-rake. It should be made of wire a size larger than is commonly used, and will answer admirably for the purpose mentioned.

SCARIFIER OR CULTIVATOR FOR HOED CROPS.—The implement above described, it will be seen, is intended for open fallows. One, similar in principle, but on a smaller scale, is wanted for hoed crops. The common cultivator, especially when made of cast iron, frequently fails to perform the work required, in a proper manner. Clayey soils sometimes run together and become so close and hard as to be almost impenetrable to the roots of plants. This hard crust also prevents the absorption of moisture from the atmosphere, as well as its exhalation from the subsoil, and renders the crop liable to injury from drouth. The cultivator and harrow, as usually made, are only superficial in their action; and the common plow throws the ground too much into ridges and hollows, and by its pressure or the subsoil, rather increases its compactness. An implement is wanted that will loosen the soil to such a depth as to keep it free and open, and at the same time effectually clean it from weeds and grass. Fig. 31 represents Finlayson's "Drill harrow, or horse-hoe," for working between the rows of crops. It can be regulated to any width or depth required, so as to suit the breadth of the rows. It is made of wrought or malleable iron, and the teeth should be laid with steel at the lower end.

We are not aware that such an implement as is here described is made in this country; but we hope some of our mechanics may be induced to commence the manufacture of this or a similar kind.



32—NORWEGIAN HARROW AND CLOD CRUSHER.

Norwegian Harrow and Clod Crusher.—Another implement, calculated for cleaning the land, has lately been brought into use in England, called the Norwegian Harrow. Since it was first introduced, its construction has been somewhat modified and improved, and it is thought it will prove of great utility. It is thus described:

"The acting part of this implement consists of a frame containing four horizontal spindles, on each of which is fixed a set of cast-iron bosses, with teeth projecting from them like the rowels of a spur. These teeth revolve with the spindles, those on one spindle interworking with the others, so that they severally clear and clean each other. The effect produced is a remarkable bruising, crumbling or disintegration of the soil, without any clogging of the spikes, or possible derangement of the working parts. The weight suffices to cause the spikes to penetrate to the required depth, which is also governed by an adjustment of the wheels applied for travelling the implement, and for taking it out of work when turning; but it acted quite as well when divested of the wheels and of other paraphernalia, which tended rather to embarrass than to assist its good action. Neither stones nor sods appear in any way to obstruct the way of this eminently simple machine, the stones being pushed aside and the sods torn to pieces. The force was thought to be less than that required to work a common set of harrows going equal depth, and the effect in pulverization much greater. It was tried on two different kinds of soil immediately after plowing, with similarly good results."

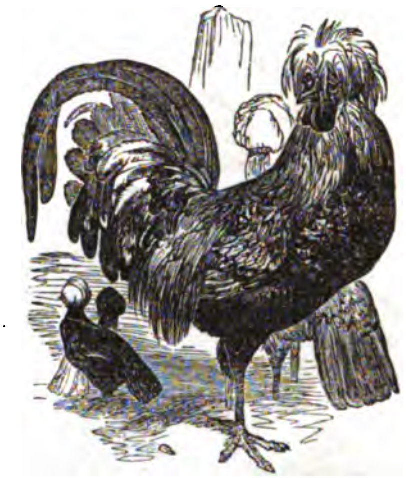
At the meeting of the Royal Agricultural Society in 1847, this implement was subjected to the examination of a committee, who spoke favorably of its operation. They observe that "it is capable of thoroughly breaking up the furrow slices from three to six inches deep, as the farmer may require, leaving the soil in a beautifully pulverized condition." It worked the breadth of five feet at a time. Its effect on the soil is different from that of the clod-crushing roller, as the latter leaves it firm and comparatively compact, while the Norwegian harrow leaves it perfectly light and loose.

Look well to cows and ewes which are about to bring forth young. It will be proper to give them a little meal, and oil-cake, for 2 or 3 weeks before parturition.

The Poultry Yard.

Varieties of the Domestic Fowl.

Crested Fowls.—Of the different kinds of domestic fowl, those having a crown of feathers, proceeding from a fleshy protuberance on the back of the head, may be regarded as among the most ornamental, and cannot fail to attract the attention of the *fancier*. Their origin is unknown, but they have existed a great length of time, and were described by Aldrovandus, several hundred years ago. This tribe embraces several varieties, which are found in various countries of Europe, and have been brought to America. Several of these varieties are held in great esteem by poultry fanciers, and are cultivated with great care on account of the peculiarities possessed by each. In size, the tribe generally, is about a medium. They are good layers, seldom wanting to sit, on which account it is best to have their eggs hatched by some other breed, whose natural constitution better adapts them to raising chickens. They are occasionally met with, having five toes to each foot, like the Dorkings, and as is sometimes the case with the Bantams. The principal varieties of crested fowls are the following:



33—SPANGLED POLAND FOWL.

1. *The Black Poland.*—The cock and hen are both of a glossy black, the head ornamented with a crest or top-knot of white feathers. This variety has been considerably disseminated in this country.

2. *The White Poland.*—A beautiful fowl, when well bred, entirely white, with a large top-knot of the same color as the body. A sub-variety of this stock was formerly in existence, which were pure white on the body, with *black* top-knots. It was described by Aldrovandus, but is supposed to be now extinct.

3. *The Spangled Poland.*—This breed, (fig. 33) is described by Martin as follows:—"The spangled Polish is a very beautiful and valuable bird, and by no means of every day occurrence. The plumage generally is of a clear orange, with shades of brown and green, every feather being tipped with *white*, so as to produce a spangled appearance. The hackles are green and orange-brown; the thighs black, more or less spangled with golden yellow. The hen is of a golden yellow, shaded with brown, and spangled with *white*. This breed is valuable, not only for its beauty, but for the excellence of its flesh. The hens are good layers, and make attentive nurses."

4. *The Spangled Hamburgh.*—This is the name given by Martin to a variety which has been known in this

country, as the "Golden Top-knot," and "Pheasant Top-knot." Some accounts represent it to have been produced by a cross of the English pheasant with the Black Poland fowl. "The general color is golden or orange-yellow, each feather having a glossy dark brown or black tip (not white,) particularly remarkable on the hackles of the cock, and the wing coverts, and also on the darker feathers of the breast. The female is yellow or orange-brown, the feathers in like manner being margined with black. Birds thus colored are called *golden spangled*, but there is also a *silver spangled* variety, differing in the ground color of the plumage, being of a silvery white, with perhaps a tinge of straw-yellow, every feather being margined with a semi-lunar mark of glossy black. Both varieties are extremely beautiful, and the hens lay freely. First-rate birds command a high price, and the same observation applies to the spangled Poland."

34—THE SPANISH FOWL.

THE SPANISH FOWL.—Of this excellent and beautiful variety, (fig. 34,) there have been but few specimens introduced to this country; and as we have not sufficient acquaintance with it to justify us in giving a particular description, we copy, entire, that of Mr. Martin, who appears to hold the breed in high estimation.

"Like the Black Poland, this breed is clad in glossy sable plumage, but is not crested with a top-knot; on the contrary, the comb is remarkably large, single, and often pendant on one side; the wattles are extremely developed, and the skin below the ear on each cheek is *white*, contrasting strongly with the scarlet of the comb and wattles, and the glossy black of the plumage. The cock is a noble and stately bird, remarkable for size and height; it is in fact, superior in stature to all our domestic races, if we except the Kulm, or Malay fowl, and at the same time it possesses excellent symmetry. The hen is also of large size and good figure. Brought originally, as it is believed, from Spain, this breed is nevertheless very hardy, and is reared as easily as any of inferior importance. To those who breed fowls for the sake of the flesh and eggs, this fine variety cannot be too strongly recommended. The flesh is delicately white, tender, and juicy, and the hens are free layers. Some persons complain that the hens are far better layers than sitters. Better layers are none, but we cannot say that we subscribe to this complaint; indeed, a breeder of these fowls, for his own use, in the neighborhood of the writer, affirms that the hens made excellent sitters and nurses, and he has had many years' experience respecting them. The eggs are of very large size, and of first-rate flavor.

"Inferior cross-breeds of this Spanish variety are very often to be seen; but such are not worth keeping. Let the pure strain only be adopted; it may be preserved from degenerating by the occasional introduction of males of the same race, and up to the mark in every point, which have descended by a collateral branch from the same root, and which have therefore, only a remote connexion with the stock to which they are admitted. It is thus that breeders may often benefit each other by mutual exchanges."

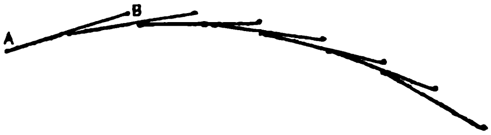
The Horticultural Department

CONDUCTED BY J. J. THOMAS.

Laying out Curved Walks.

SINCE the attention of men of taste in our country, has been more directed to an improved style of laying out grounds,—and particularly in the rejection of stiff lines and straight walks, and in the adoption of pleasing curves,—the want of an easy and certain mode of reducing plants to practice, and of staking out any desired curves upon the ground, has been much felt by the inexperienced. We therefore lay a very simple mode for this purpose before our readers.

Take a ten-foot pole (or of any other convenient length) and place it upon the ground in the direction of the commencement of the intended walk, shown in the annexed figure by the line A. B. Then measuring on one side of its forward end, one, two, three, or more inches, according to the length or shortness of the curve, stick in a small peg at this measured point, and another close to the middle of the pole. Then slide the pole forward half its length, bringing it close to the two pegs, and then measure off the same distance again from the forward end, and continue to repeat the operation till the desired curve is formed. An inspection of the figure will nearly of itself explain the mode. A long curve may be made to pass gradually into a shorter one, and vice versa, by gradually increasing or diminishing the distance measured from the forward end of the pole.



If one inch is the side distance at each successive measurement, the radius of the curve thus formed will be about 330 feet—from which an increase or diminution in size, may be easily reckoned, and applied in practice.

Dwarf Pear Trees.

F. R. ELLIOTT, in his report on fruits to the Ohio Convention, says that without resorting to the early fruitfulness produced by quince stocks, but from standard trees on pear stocks, he has obtained fruit in the following periods:—Bartlett and Wurtemberg in two years *from the bud;* Lewis and Foster's St. Michael, in three years from the bud; Amire Joannet, Muscat Robert, Duchesse d'Angouleme, Dearborn's Seedling, Fine Gold of Summer, Ne plus Meuris, Passe Colmar, White Doyenne, and Columbia, in four years from the bud. He is of opinion that in ten years, pear trees upon pear roots only, will be sought by the planter, except in small town gardens.

Ohio Fruit Convention.

The unparalelled increase in the dissemination of fruits through all parts of our widely expanded country, is giving a new feature to pomological investigation. Where formerly half a dozen neighbors could hardly be brought together, for the sole purpose of discussing fruits, we now have large organized conventions, not only from all parts of a large state, but from half the states themselves in the Union.

The fruit growers of Ohio, held in 1847, the first convention of the kind in the country, the proceedings of which were published at length in pamphlet form. With untiring enterprise, they have now given to the public, in a closely printed pamphlet of 64 pages, a full account of the second convention, held last autumn at Columbus.

The convention consisted of 25 delegates—a more convenient number for comparing fruits by cutting up and eating, than the 70 at Buffalo, or the 250 at New-York. A. H. Ernst, of Cincinnati, presided, and M. B. Batehan and F. R. Elliott served as secretaries,—by the latter of whom, the present able report was chiefly drawn. A valuable feature consists in the various recorded opinions from the different delegates given in relation to each fruit. This mode of communicating information cannot fail in any case to be useful, and it is commended to the attention of future conventions elsewhere.

During the two days, more than eighty varieties of apples were examined and discussed, including mostly old or known sorts, good and bad, with some new seedlings. Of the latter, several outline figures are given.

Besides the record of the proceedings, there is an elaborate and valuable paper from F. R. Elliott, on the fruits already proved in northern Ohio; a very interesting communication from C. Springer, on the fruits of central Ohio, and the changes wrought upon many well known varieties by the soil and climate of that region; and an excellent paper by Prof. Kirtland, on the use of *special manures* for fruit trees, with a statement of some very successful experiments with their use.

The following list of apples, was compiled by the secretaries from the reports of the Convention for the two years it has been held, from the characters given by the members; it cannot fail to prove valuable to Ohio fruit raisers, and interesting to cultivators elsewhere, as showing the changes wrought by different localities in some of the best standard varieties:—

I. First rate, *and deserving further attention.*

Early Harvest,
Summer Sweet—in southern O.,
White Juneating—on account of early ripening.
Large Yellow Bough,
Summer Rose,
Early Strawberry.
Red Astrachan—only for market culture,
Summer Queen,
Golden Sweeting,
American Summer Pearmain,
Lowell,
Jersey Sweeting—not known in southern Ohio,
Porter.
Fall Pippin—by majority—some dissenting,
Cooper,
Fall Wine,
Rambo,
Westfield Seeknofurther,
Belmont or Gate—except in some sections of south Ohio,
Yellow Bellefleur,
Esopus Spitzenberg,
Am. Golden Russett,
Roxbury Russet,
Willow Twig—only as a keeper,
Green & Yellow Newtown Pippins,
Swaar,
American Pippin—only as a keeper.

II. Second rate—*or good for cooking purposes.*

Genetting,
Early Chandler,
Gault's Belleflower,
Summer Cheese,
York Russet,
Maiden's Blush,
20 ounce apple,
R. I. Greening--except for some few sections and until experiments can be tried in manuring it with ashes, &c.
Sweet Pippin,
Gloria Mundi,
Gilpin or Romanite,
Baldwin—on account of dry rot,
Michael Henry Pippin,
Cracking apple,
Kaighn's Spitzenberg,
Black Apple,
Pumpkin Sweeting,
Limber Twig.

III. Third rate—*or worthless.*

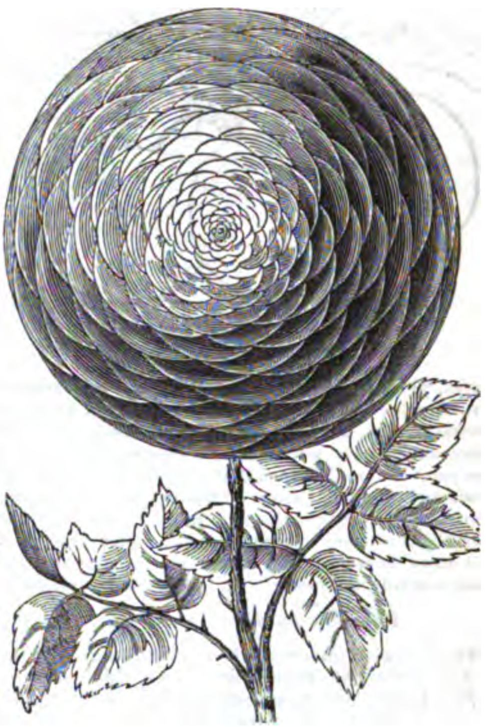
Augustine,
Slug Sweeting,
Gloucester White,
Prolific Beauty,
Colvert, or Pound Pippin,
Golden Gage,
Edgington,
Black Gilliflower,
Alexander,
Cheescboro Russet.

IV. No decided opinion expressed.

Tart Bough,
George apple,
Williams' favorite—not sufficiently known,
Spice Sweet,
Drap D'Or,
Trenton's Early,
Catline,
Gravenstein — not generally known.
Dyer,
Wonderlich Spice,
Beauty of Kent,
Orndorf,
Late Strawberry,
Sweet Belleflower,
Kiler's Maryland Red,
Gabriel,
Hicke's winter sweet, Springer's Seedling, and other new seedlings,
White Pippin,
Federal,
Seeknofurther of Coxe,
Polly Bright,
Newark Pippin,
Roman Stem,
Pomme de Niege,
Winter Cheese,
Winter Pearmain,
Fall Harvey,
Western Spy,
Flushing Spitzenberg,
Danvers Winter Sweet,
Carolina Red Streak,
Cable's Gilliflower,
Peck's Pleasant,
Brabant Bellefleur,
Ribston Pippin,
Ohio Nonpareil,
Cumberland Spice,
Red Calville,
Laquier,
Scarlet Pearmain,
Court of Wyck,
Scollop Gilliflower.

The Perfect Rose.

The astonishing improvement effected in the Rose by skilful and scientific cultivation cannot be appreciated but by those who have seen the finest specimens. The neat and delicate forms which some of the best assume, is in striking contrast with the old, loose, irregular, semi-double varieties. As a specimen of "a perfect rose," in form, we have copied the above figure from *The Horticulturist*, for although it has not been very closely approached in its accurate circular form, yet we not unfrequently find specimens of some of the best varieties, and particularly of some of the hybrid China roses, quite nearly imitating it in the beautiful and regular imbrication of its petals.



36—The Perfect Rose.

The Cherry Plum.

This pretty and very early plum, is quite different in its character from our other cultivated varieties, being in itself a distinct species, (*Prunus cerasifera*,) and is supposed to be a native of North America. The tree is thorny, has a small bushy head, and bears small, pointed leaves.

With the exception of the White Primordian or Jaune Hative, it is the earliest plum known; and although of only pleasant flavor, it is valued for its ripening at midsummer, when the brilliant scarlet surface of the fruit, contrasting with the dense and dark green leaves, gives the tree quite an ornamental appearance. But its value is greatly lessened by its scant productiveness. This difficulty, we are informed, has been overcome by *root pruning*. Further experiments on this point are needed; and if it may be thus rendered productive, it would prove a valuable variety, on account of its extreme earliness. Its little liability to the *leaf-blight* is another characteristic, which renders it still more desirable that further experiments may be made towards the increase of the amount of its crop.

37—THE CHERRY PLUM

Remarks on Fruits in Ohio.

The following interesting facts are drawn from the Report of the Ohio Fruit Convention of 1848:—

Fire Blight.—C. SPRINGER, speaking of fire-blight, remarks, "Experience satisfies me, that if we would succeed with the *pear*, we must either select such kinds as are naturally of slow growth, maturing their wood as they proceed, as the White Doyenne, Seckel, and others, or we must set them in thin soil. On dry hard points or banks, which have little moisture, they will advance moderately. I have seen fast-growing trees, thus situated, remain for more than twenty years, unscathed by blight, while the very same kinds, in moist rich soils, in sight of them, were soon exterminated." In one instance, however, it is stated, that pear trees succeeded finely on low ground, but it was found that the subsoil was a dry bed of sand.

Special Manures.—Prof. KIRTLAND states that on a worn out piece of land, that would not produce wheat, pear trees would not grow more than two to six inches in a season, apples but little better; but the peach and cherry flourished finely.

Gypsum, clover, leached ashes, and a little barn manure, in two years, brought plenty of straw, with only 11 bushels of wheat per acre. A second plastering, clover turned in, barn and slaughter-house manure, and phosphate of lime, brought, without increasing the straw, 19 bushels of excellent wheat per acre. Phosphate of lime, ashes, barn manure, with a little salt, caused the pear trees to grow freely and bear well.

Rawle's Jannet.—C. SPRINGER says that this celebrated apple, "in March and April, is hard to beat for cooking and eating. The tree blooms ten days or two weeks later than most apples, and, in consequence, once in ten or fifteen years, makes a splendid hit at bearing when all others fail [from spring frosts.] The objection to this is, there are too many knotty and under size."

Baldwin.—"This fruit, one of the best winter apples in Connecticut and Massachusetts, when raised at Marietta, in this State, is but a temporary fall fruit."

Royal George Peach.—F. R. Elliott says, "I cannot see any thing in this variety to recommend it."

Early Tillotson.—"This fruited as early as Early Anne, and is a much superior fruit, decidedly the best very early variety." F. R. Elliott.

Crawford's Early.—"I have seen this beautiful and large peach in New Jersey, but the specimens grown here equal, if they do not surpass, any I have seen in its native state. Several specimens measured ten and a-half inches round, *none less than nine inches*, and some eleven. It is a rich golden yellow, with clear, rich red to the sun." F. R. Elliott.

Transplanting Evergreens and other Trees.

EDS. CULTIVATOR—In the third number of this year's *Farmer & Mechanic*, I found an article entitled "Transplanting Evergreens," credited to *The Cultivator*, which has induced me to send you this communication. There are three methods recommended in the article in question.

The first—"to cut a trench late in the autumn around the roots of the tree to be removed, leaving a ball of earth about the roots, proportioned to the size of the tree; after this is frozen, and during the winter, the trees, with the frozen ball of earth, are to be lifted by the aid of a stout lever. They can then be drawn upon a sled and placed the north side of a barn, or other building, and having straw, old hay, or saw dust packed about the frozen balls, they will remain unthawed, till the proper season comes round to set them out."

By the other two methods, the ball of earth is to be raised without freezing; in the one case to be tied up in matting, and in the other, to be allowed to freeze after the tree with the ball has been raised from its natural position to the surface. These last methods may do very well for small trees, but for the transplanting of larger ones, the first is much to be preferred; for a ball of earth sufficient to contain the proper quantity of roots for a large tree, could not, when unfrozen, be raised from the hole in which it stands, without breaking it.

The objections to the first mode suggested, are—1st. A second lifting of the balls of earth, and transporting to the place of setting out. 2nd. Where a large number are to be transplanted, particularly large trees, it would be difficult to find room enough on the north side of a barn; or hay or straw enough to cover them without using a rick.

I have had much experience in the transplanting of trees of all sorts, particularly evergreens—60 or 70 each winter for several years, and have been very successful, and if it will not make my article too long, I propose to give the details of my method for the benefit of your readers. It is the same as that first mentioned, except that I plant the trees as soon as moved. The chief labor and difficulty consists in placing a heavy ball of earth, weighing from 1 to 6 tons, upon the sled (or rather stone boat, for I find that far preferable,) and once there, I do not want to remove it, except to be placed in the hole where it is to remain permanently. To be able to do this, cover the ground six inches deep with stable manure and litter in a circle 8 or 10 feet in diameter, on the spot where the tree is to be set. There will then be no difficulty in digging the hole when necessary, for the manure will have kept out all the frost, and you will have fresh, dry and warm mould to place about the tree for the young fibres to run into. If the soil be not good, another spot (beside an old stone fence, or on the *turning* of a field,) should be kept free from frost to dig good earth from. The best mould that can be had should be used for this purpose—it makes an *immense* difference in the subsequent vigor of the tree. After the tree is planted, and the hole nearly filled up, the manure may be spread on the top, and that again covered with earth. It retains the moisture and nourishes the young fibres the next summer without injuring them. Where a heavy fall of snow occurs early in the season, followed by a few nights of cold weather, THEN go to work *at once* to transplant, and half the labor is saved. The trees may be dug round, (for the snow will have prevented the frost from penetrating deeper than can easily be broken through by a pick-axe,) allowed to freeze one or two nights—and the less frozen the better, if they are only hard enough to bear the rough usage they must get—and then be set out at once.

I have transplanted trees of all kinds with stems from the size of my arm to twenty inches in diameter at the butt, and from fifteen to thirty feet high. Evergreens—at least, white pine, red cedar and hemlock, for my experience extends no farther—are the easiest trees to transplant, as they require little or no watering the next summer. Next in order, come the various kinds of elm, maple and poplar. Birch, chestnut and locust are more difficult. I have lost one out of three. Oak, hickory and beech, may as well be left undisturbed in the woods, unless taken small—say, the size of a man's arm and under. All these require watering copiously during the dry weather of the next summer, and some water the summer after.

I do not raise the ball with levers from the hole, but having broken it entirely loose at the base with levers, crowbars, &c., I hitch the oxen, by a long rope, to the stem of the tree above the branches—protecting the tree from being hacked by the rope—and then turn it down on its side. An inclined plane having been cut on one side of the hole, the stone boat is run under the ball, now lying on its side in the hole; the tree is uprighted, bringing the ball into the stone boat, the oxen are hitched to the boat, from one to three and even four yoke being sometimes necessary, and the tree is carried off standing upright. At the side of the hole where it is to be planted, it is again turned over and rolled or "cut" into its place: be careful to see that it stands perfectly straight and presenting the best side to the point from which most seen.

Should this communication prove acceptable, I will send you, another time, a much easier method of transplanting large trees from swampy ground, without freezing the balls of earth. A BOOK FARMER.

Apple Trees from Cuttings.

EDS. CULTIVATOR—In your publication of October last, there is a short article headed "Horticultural Humbugs," and the first you mention is, that "the insertion of apple grafts in a potato before planting in the earth, insures the growth." That apple grafts will not grow like the cuttings of gooseberries and currants, whether planted in a potato or any way else, I believe to be a general truth, but perhaps not absolutely so. Some particular kind of tree, under particular circumstances, *may* have succeeded by planting the graft in a potato, which may have given rise to the statement at first.

Your article brought fresh to my recollection, a fact which came under my own observation, and which I shall now relate. I spent the fore part of my younger years in the west of Ireland; while there, I was told that there was a certain kind of apple tree which could be propagated by planting cuttings in the ground the same as the gooseberry; there were small knobs on the branches; and when twigs were cut off below one of these bulbs, and planted in the ground, roots struck out from said knobs, and trees were produced, same as the parent stock. Having my doubts on the subject, I resolved to put it to the test. I procured a suitable twig and planted it in my garden, and no doubt it did start, and grew well, but that is not all. The said twig happened to have a fruit bud upon it, which not only blossomed out, but a full sized apple was matured to perfection on it that same season. Now had I not seen this with my own eyes, and done it with my own hands, it is more than probable I would have been as skeptical as you on the subject, and concluded the whole a humbug also.

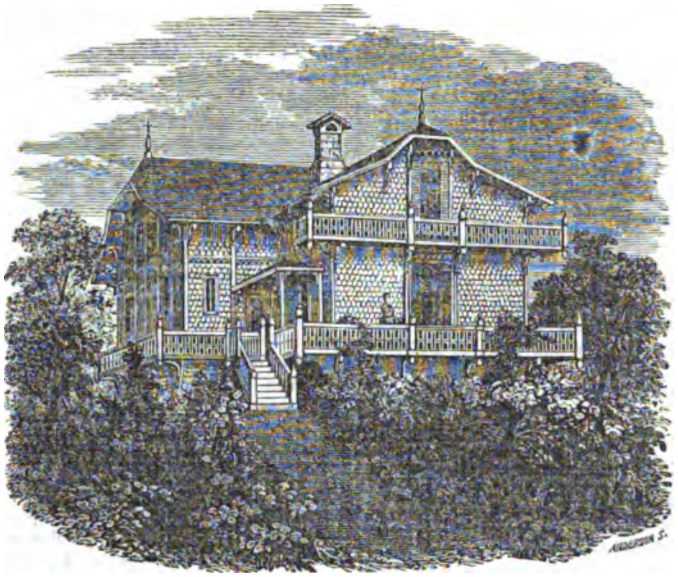
What became of the young tree, I cannot tell. I very soon afterward left the place, and forgot all about it. It may be a good bearing tree to the present day. The fruit, as far as I recollect, was good, and worth propagating, and now, since the matter has been brought to my recollection, I intend to write over for a few grafts from some of these trees, and if I succeed in obtaining them, and live to see the result, you shall be duly informed. WM. FREELAND. *Brockville, C. W.. Jan.*, 1849.

Large Pear Tree.

EDS. CULTIVATOR—While on a recent tour along the valley of the Susquehannah, my attention was called to a pear tree standing on the bank of the river, near the upper line of the Sheshequin flats, in Bradford Co., Pa., on the farm of George Northrup. I was informed that one of the oldest settlers of that region, while accompanying Gen. Sullivan, on his expedition against the Six Nations, in 1779, found this tree surrounded by an orchard of some three acres. Orders were given to cut it down—but he begged for the preservation of this pear tree, and it was spared, it being the only fruit tree saved. I am told that it then measured, 2½ feet from the ground, 15 feet in circumference. In growing, it had formed a crotch five feet from the ground; one part has split off and decayed.

About one-third of the tree is still standing, and alive, but quite rotten on the inside. It now measures four feet in diameter, (that is, by measuring across the inside of the slab which still remains,) and 9¼ feet in circumference, and bore, last season, two bushels of fruit. The inside of the part standing is quite dead—only the bark, a thin shell of the body, and a few limbs, show any symptom of life. E. C. FROST. *Seneca Lake Highland Nurseries, Catharine, N. Y., Jan.* 1849.

Keep cattle off the fields, when the ground is so soft that they will poach it with their feet.

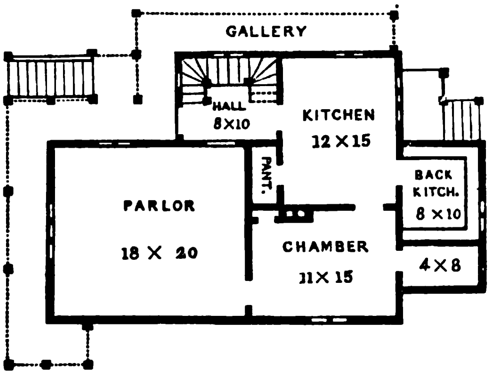


38—PERSPECTIVE VIEW.

Rural Architecture.

A Swiss Cottage.

The above is a representation of a cottage in the Swiss style, erected by E. P. **Prentice**, Esq., at Mount Hope, near Albany. It is placed on the side of a considerable eminence, which gives an appropriate site for a building of this picturesque and somewhat wild character. It is a style evidently adapted to a country of varied and uneven surface, and we think might be introduced with excellent effect in our hilly and mountainous sections. Though especially tasteful and ornamental in such situations, it admits of equal conveniences for household economy and comfort, as any other style, as will appear by an examination of the plan herewith presented. It is proper to remark that there are three good bed rooms on the second floor.



39—GROUND PLAN.

The external covering of the house is shingles, which are cut to a pattern before being laid, so as to give the appearance represented in the engraving. The frame of the house was first covered with rough weather-boarding, on which was laid a covering of tar-paper,—a cheap but useful article for such purposes, rendering the house warm and dry.

The plan of this cottage was designed by Mr. **Penchard**, an architect of Albany, who also designed several other handsome cottages, erected by Mr. **Prentice**, which have greatly ornamented his estate, and added much to the interest of the neighborhood.

The Farmer's Note-Book.

Indian Corn as Food and as a Crop.

BY PROF. EBENEZER EMMONS.

I believe the value of Indian corn has never been over-estimated. Possessing in itself every element which is essential for sustaining life, to supply the waste of the system which it continually undergoes, and being at the same time easily assimilated, it seems to unite in itself those properties which render it one of the most important productions of the soil.

But this does not comprehend all that may be said upon its value; we have reason to believe that many of its varieties may be employed for special purposes. Some, possessing a higher value for fattening, others as a common nutriment, in which the balance between the calorifient and nitrogenous matters are nearly equally preserved, and others still, in which the nitrogenous matters considerably exceed the fat-producing or calorifient matters. Indian corn, however, has rarely, if ever, been cultivated with a view to obtain from it the special advantages which its varieties possess. Indeed, if we may judge of the views of writers upon this subject, we are rather led to believe that Indian corn in its composition, is the same in all its varieties; and it may be true—indeed, ought to be true—that this grain should possess within certain limits, a composition of its own, and which is not essentially different in its varieties. Still, it is found on analysis, that some kinds are better adapted to special purposes than others, and without doubt, considering its readiness to form varieties, we have reason to suppose that if attention was turned particularly to this object, we should obtain, as we may other products, varieties which for particular purposes, would be more valuable than any we now possess. As they are now found to be constituted, some, as I have already indicated, possess advantages for particular purposes which others do not, and for which farmers might employ them in preference to others.

Hitkertoo the analyses have been too few and too imperfect to determine the special advantages I have referred to. Professor Playfair's analysis has been often quoted for the purpose of showing its nutritive powers, and I may be permitted to refer to it here, along with M. Payen's and Dana's, the two first of which may be regarded as erroneous, or as only distant approximations to the truth. Thus they state respectively its composition, as follows:—

	Playfair.	*Payen.*	*Dana.*
Protein,	7.	4.80	12.
Fatty matter or oil,	5.	35.60	77.09
Starch,	76.	28.40	
Water,	12.	....	9.
Coloring matter,	..	.20	
Dextrine,	..	2 00	
Cellular tissue,	..	20.00	
Various salts,	..	7.20	1 31
	100.	98.20	99.40

Some of the discrepencies in the foregoing analyses are undoubtedly due to errors in the work. For instance, the 35.60 oil in M. Payen's, and the large amount of cellular tissue. So the protein compounds in both Payen's and Playfair's are stated too low. The starch is also too high in Playfair's analysis. It is evident he includes in it the fibre or cellular tissue, and was probably induced to do so from its close similarity in composition to starch, and its uses in the animal economy. Some allowance in these analyses should be made for difference in varieties which they respectively used; as it would be quite singular if the same kind was employed in each case. That varieties are different in composition, to a certain extent, appears from several analyses which I have carefully made, and which I will now state, selecting those which exhibit certain extremes in their constitution:

	No. 1.	No. 2.	No 3.	No. 4.
Starch,	49.22	41.85	11.60	53.40
Gluten,	5.40	4.62	4.62	3.22
Albumen,	3.32	2.64	6.62	8.96
Casein,	0.75	1.32	5.84	1.00
Oil,	3.71	3.88	3.60	2 80
Fibre,	11.96	21.36	11.24	3.20
Dextrine,	1.89	5 40	24.82	2.41
Sugar and extract,	9.55	10 00	8.00	9.60
Water,	14.00	10 00	10.32	12.55
	99 80	101 07	100.96	99.88

The *first*, is the large, eight-rowed yellow; the *second*, the large Ohio Dent; the *third*, sweet; and *fourth*, the calico corn.*

If we compare the foregoing analyses with each other, it will not escape our notice, that the calico corn contains the most starch and the least fibre; and that the sweet corn contains the least starch and the most dextrine and nitrogenous matters. The Ohio corn ranks the lowest in the nutritive or nitrogenous matters. The fibre, it is possible, may not have been perfectly separated; still, judging from its coarseness, I believe, in this respect, it is not far from the truth. Its dextrine is greater than the other, excepting sweet corn, and it will probably be found that all the indented kinds contain more of this element than those which are full and plump, as the dextrine is a substance which shrinks in drying, like gum arabic. The above specimens of corn were the growth of the past season, and as they were not all equally dry, a slight difference appears in the amount of water which they respectively contain. The fattening property of Indian corn has been attributed to the oil of the grain, and its amount has been usually spoken of as indicative of its power in this respect. Those, however, who have been in the habit of feeding this grain, will hardly accept of this element as being at all indicative of its value for this purpose. We certainly cannot account for its effects in fattening animals, if its oil alone was to be taken into the account. We have, on the contrary, sufficient grounds for believing that its *starch* plays a very important part in this process.—(*To be continued.*)

Improvement by Draining.

EDS. CULTIVATOR—Since Mr. HOWARD was here in June, 1847, I have dug over 1200 rods of drains, and the greater part is laid with tiles. I should have had 800 rods more done, if I could have got tiles enough in the fall. But I have now made arrangements by which I expect not to be disappointed in the future.

There is certainly, no way that a farmer can expend money that will yield so much interest as in draining wet, moist, or even *dump* land—especially if he intends to grow winter wheat. If the land is what is called wet, and of easy drainage, (I mean such as has a porous subsoil to the depth of two to two and a-half ft.,) the additional crop of wheat or Indian corn, the first season, will do more than pay the outlay in draining, and on moist or damp soils, where more wheat will grow than on wet soils, it may take the additional crop of two seasons to pay the cost of the drainage; but on *hard-pan* land, (that is, where the hard-pan comes within eight or ten inches of the surface,) I think the time has not yet arrived that we can drain such land profitably, in this country; but on all lands that can be worked with a spade two and a-half feet deep, it will pay well to drain, if the soil is injured by surface water.

My drains have cost me about forty cents per rod, all finished; but I have now made a contract for tiles at a cheaper rate. I am also, going to lay *pipes* two inches in diameter and fourteen inches long, which will answer all purposes, except where there is considerable run of water. The cost of the pipes will be less than that of the tiles, and by filling the drains with the plow, (I have always filled with the shovel till last fall,) I think I shall be able to finish my drains for 30 cents a rod.

Last fall, I exchanged ten acres of land with a neighbor. I got ten acres of wet land for ten acres partially drained. I made the exchange in order to get an outlet for my drains, through the ten acres I obtained, part of which was so wet, that when I made the exchange, cattle and horses were liable to mire on it; and it produced only course wild grass like the wet prairies of the West. The day I made the exchange, I set six men to ditching the new piece, and now a pair of horses will draw a wagon loaded with two tons, over any part of it that is drained, and by far the worst of it is done. The eyes of my neighbors are on that piece of land, and it would grieve me were I not to succeed with it; but I have no doubt I shall make it as good land for grass or summer crops as there is in the state of New York.

I am sanguine that the crop of wheat could in many instances, be doubled or more than doubled by thorough draining. I am aware that damp or moist land is by some held to be best for oats. I do not admit the correctness of the idea. In the first place, such land is frequently situated in hollows, where it has the benefit of the wash of uplands, and of course has become rich at their expense, and another thing, the dry land, in this part of the country, is almost always hard run with wheat, and generally brings a fair crop, which damp or moist land seldom or never does. For these reasons it has every possible chance to bring a bulky crop of oats, when the season suits. But let the dry land have the same rest with the damp land, and in nine cases out of ten, I have no doubt that the former will produce the heaviest crop of oats. The damp soil may produce the largest bulk, but put them on the scales, and the latter will be found wanting. Such is my experience. And with grass, also, wet or damp land generally produces the largest bulk; but every man that has pitched as many loads as I have done, knows that the hay from dry land is double the weight of that grown on wet land, when the produce of both is in the same state of dryness; and the feed, as well as the hay from dry land, is far more nutritious for any kind of stock.

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* The calico corn is a variety similar to the Tuscarora, except that the former is variegated in color, and the latter is white.—EDS.

I would say, therefore, drain, for the good of all crops, and for pasturage. It often grieves me, (or I might say *vexes* me,) to hear gentlemen whom I highly respect, and who profess to take science as their only guide in farming, say—"Is there no danger of making your land too dry?" Or—"are you not afraid that the most valuable salts will be drained from your farm?" Others say,—"We always look upon your farm as rather too dry." Thus, if I had not entertained strong faith in my own practice, I should have been deterred from draining by the opinions of others.

STALL-FEEDING CATTLE.—Since Mr. H. was here, I have built large barns, sheds, and cattle-stalls, and have enough to fill them all; and when I get 2,000 rods more of drains made, I have no doubt I shall require more barn room. I have fifty excellent steers, 3 years old last spring, feeding for some of the eastern markets. They were all, with one exception, fit for the butcher, when I commenced feeding hay and meal. I intend to feed them till March or April. JOHN JOHNSTON. *Near Geneva, N. Y., Dec.* 21, 1848.

Indian Corn in Ohio.

EDS. CULTIVATOR—There is no branch of agriculture in this country, and especially in the West, which engrosses more toil, and is worthy more attention than corn planting.

Maize, or Indian corn, is, perhaps, the most economical, healthful, and abundant food, which God, in his goodness, has provided, in these last days, for the sustenance of man. And yet there is no crop in which a greater diversity, and perhaps it may be added, a greater want of the necessary culture exists.

In the great valley of the Mississippi—the fertile soil and genial climate almost everywhere to be found, produce this crop in profusion, even with indifferent cultivation. It is, however, true here as elsewhere, and of this crop as well as others, that increased attention and well directed labor are amply requited. Of course, no general remarks could be applicable to the whole valley—for it is a world within itself. Upon the broad prairies, where the sward, which for ages, has been the pasture of the wild horse and buffalo, is broken up by the heavy teams and massive plows necessary for the work—the planting and harvesting is all of toil, which remains in order to ensure a fair crop for a number of years.

Upon our most fertile and extensive valleys,—the Wabash, Miami and Scioto,—owing to the nature of the soil, far less labor is necessary to produce a tolerable return, than in the less favored corn regions.

Ohio is made up of hills and valleys—small valleys generally, with some little champaign country;—and the general interests of our state call for the cultivation of a variety of crops, and the practice of a well chosen rotation.

The course adopted upon my farm, is to turn under a green sward for corn—follow with wheat, seeded with clover and grass—mow one year and pasture the next—then turn under again for the next series—this is, of course, varied according to circumstances.—I have one field, which for twenty or thirty years, has been in corn almost all of the time; and I shall plant it again next year, it having yielded a great crop the present season; but this, like much of the land along our larger water courses is frequently overflowed—and last year there was a rich deposit from the waters of the Muskingum, of some four inches of earth.

Others here adopt a system, which seems very advantageous to the sheep-growers, of sowing rye among the corn at the last working, and keeping it for March and April pasture, turning under what of the sward remains for a second crop of corn. This is found to work well upon rich bottom lands, where wheat is a precarious crop, and the green feed thus furnished is invaluable either for sheep, cows or horses.

The most common mode of culture is to plow the ground but once before planting—yet when foul with weeds, we turn under in the fall—and I have found some benefit from this course upon some soils—especially where tenacious—if the ground is very uneven and lumpy, it is harrowed and sometimes rolled.

Planting is performed in a variety of ways—some furrow out, with a small plow, four feet apart each way, others three and a-half, leaving from three to five stalks in a hill—and yet others furrow but one way, and drill plant from ten to twelve inches apart in the row. A plan which I have adopted with some success is, to furrow four feet one way and two feet the other, leaving but three stalks in a hill—in this case it is worked, first, in the wide rows; second, in the narrow ones—and after that, entirely in the wide ones.

We cultivate, generally, the first time with a cultivator or fine harrow—sometimes with a plow—the two following workings are performed with a plow—not a few using the old fashioned shovel plow. If the ground is fresh, or if rye or wheat is to be sown very early, the cultivator or plow is used for a fourth working; the crop is then laid by—*made*, as our southern neighbors call it.

In September, it is ordinarily cut up and set in shocks ready for husking; the ground is then ready for plowing and sowing in wheat.

In November and December, the corn is husked, and the corn fodder ready for use; and is either drawn to some convenient yard, or set in large shocks in the field, ready for drawing out as the stock may require.

We raise about sixty-five bushels upon an acre of bottom lands, with fair tillage. Our premium crops this year, upon hill lands, were one hundred and eighteen bushels of shelled corn per acre, with superior culture.

The average price of corn here is twenty-five cents.

We most respectfully solicit suggestions. D. E. GARDNER. *Marietta, Ohio, Jan.* 1, 1849.

Subsoil Plowing.

I have made several experiments with the subsoil plow, one or two of which I will state. In the spring of 1848, I subsoiled a strip of twenty feet in width through the middle of a field of Barley. At the time of cutting the grain I measured eight different pieces, each piece exactly the size of the other. I then cut, shelled and weighed each parcel separately. Four of the parcels were from the subsoiled part, and four from the part that was not subsoiled. The ground was all alike; the yield on the whole was rather slim, but the parcels that I kept separate, weighed one pound in ten more on the subsoiled part, than those did on the unsubsoiled part. I endeavored to be as accurate and impartial as possible. The soil was dry and sandy.

In the spring of 1846, I subsoiled a strip some four feet wide, through the middle of a field, and planted to potatoes. They all rotted badly—were hardly worth the digging. The weather was very hot and dry through the summer; the ground so hard in the field that it was almost impossible to plow it, but the part that was subsoiled, plowed at least one-third, if not one-half easier than the other. A Practical Farmer. *Westchester Co., N. Y., Jan.* 27, 1849.

Cheese-Making in Virginia.

Eds. Cultivator—I fear that a direct answer to the inquiries of your letter of the 6th inst., may place me in the false and unenviable position of "the scholar attempting to play the teacher." Allow me, therefore, to give a portion of the history, with such an "account" of my dairy as your inquiries propose to elicit.

In the year 1846, several gentlemen of the county adjoining this in which I live, and Mr. Jno. C. Underwood, of Herkimer county, in your state, determined to establish (each,) a dairy farm in this district of country. We began to purchase cows in the winter of 1847, and aided by the kind exertions of Mr. Underwood, we supplied ourselves with dairymen and utensils, from New-York, and commenced business the following spring.

I was, fortunately, enabled by the kindness of Mr. Underwood, and the recommendation of Mr. A. L. Fish, of Herkimer, to secure the assistance of Mr. H. M. Mattison, of Herkimer, and to his energy, patience, and knowledge of his business, whatever credit for success we may be entitted to, is altogether to be attributed.

In the winter of '47, we purchased our cows. Mine averaged me $11.48. I made my first cheese April 20th,—twenty-one pounds—from 9 cows. The spring was cold and dry, the grass backward, the cows, picked up wherever we could procure them, calved irregularly—many very late—and of course, in so irregular a dairy I cannot calculate the average yield, as calculated in old established dairy countries. I give mine as yielded by the cows at the pail, believing that your object is, not to contrast the yield of Virginia dairies with the yield in New-York or New-England, but to draw forth facts which may enable northern men to form an opinion upon the relative advantages offered by the north, and so far south, for dairying interests.

On the 15th of May we milked 21 cows, and made 53 pounds of cheese—feeding 2 bushels of shorts. On the 15th June milked 40 cows, made 108 lbs.,—fed three bushels of shorts. July 15th, 52 cows, 123 lbs., fed three bushels shorts. Aug. 15th, 58 cows, 150 lbs., fed four bushels shorts. The drouth, or rather its effects, were felt until this time, after which the pasturage continued fine through the season. Sept. 15th, 51 cows, 139 lbs. Oct. 23d, 118 lbs., and commenced making butter. Nov. 15th, 43 cows, 87 lbs. of cheese. Dec. 30th, 34 cows, 34 lbs. of cheese; and by the 1st January, we had made 25,244 lbs. weight from the press.

My cows averaged me in price, when bought, $11.48. I fatted on grass, after the 1st September, and sold in November, fifteen, at an average price of $20. We milked out of doors until about the first of November, when we got into our stable. The cheese-house we began to use in July. My cheese-house is 60 feet long by 26 feet wide. Water is conveyed to it in pipes under ground. The stable is 104 feet by 36 feet, with stanchions for 63 cows. The cows stand in the centre, with their tails towards each other. The space between the rows of stanchions is 16 feet. The side alleys 10 feet each. There is a cellar 24 feet by 36, under the barn, for manure, which is delivered from the stable through trap doors in the floor.

Through the year 1848 we kept 63 cows, and made 34,000 lbs. of cheese. I cannot lay my hands on my dairyman's butter account for either year. We fed whey with the shorts, keeping but few hogs. But we raised 25 calves the first, and thirty the second year. The cows had a range of nearly 400 acres of pasture, with abundance of water.

I established a second dairy last year, and shall establish a third the coming spring. The second has 40 cows, the third will have 63. The number of dairies in the adjoining county has been increased from three to six, and there is a great deal of land well adapted to the purpose. My neighbor, Lt. Col. Randolph, now offers for sale a farm of 316 acres, for $5,000, with a grist mill, and a meadow of 40 acres, about one mile from the village.

Our dairymen are all from New-York. We use the dairy stove, (having been unable to procure a steamer,) and I believe the only variance from the New-York practice in making cheese, is to scald and salt rather higher, which we think is rendered necessary by the length of our summers. Rob't M. Marshall. *Happy Creek, Va., Jan.* 19, 1849.

P. S.—Our cows are considered by the northern dairymen who have seen them, as fairly averaging, in point of size and appearance, with the dairies of the north. R. M. M.

Warm Barns.

Eds. Cultivator—So much has been said upon the necessity of keeping cattle warm in winter, that it might be supposed every farmer would have his barn warm and comfortable; but as we call upon neighboring farmers, we find many of their barns quite open, exposing their cattle to the wind and drifting snow. Many, doubtless, do not know how much more it costs to winter cattle in a cold barn than in a warm one, and that, at best, they cannot be made to thrive so well upon the same quality of food. The animal body acts as a furnace which must be supplied with fuel, and the greater the exposure to cold, the more fuel there must be to keep up the heat.

Capt. Parry, when wintering in the frigid regions, found his men lost their appetite for light food, and ate clear butter and grease, with a keen relish, and without the slightest inconvenience, and that their health and comfort required these articles of food in proportion as they were exposed to the rigor of the climate. Warmly clad travellers have found, to their great surprise, that the men in some of the northern tribes, who wear little clothing, will consume daily ten pounds of flesh, besides eating as freely of tallow candles as we do of apples. So it appears, that shelter and clothing, to a certain extent, answer the purpose of food. If we apply this principle to the wintering of stock, it is obvious a great saving may be made in hay. The cattle in the barn are so many furnaces that must be kept heated. If the surrounding medium is cold, there must be more fuel, or the cattle's flesh will be consumed to keep up the heat. The farmer, then, who has 20 tons of hay in a cold barn, may save at least one tenth of it, by expending a small sum in making his stables warm; and this saving he may make every year he fills his barn, besides having his cattle in a much better condition in the spring.

Farmers frequently buy hay in backward springs, paying high prices, when, if they had expended one-half of the money paid for the hay in fixing up their stables, they would have saved buying any hay, besides having their stables warm for future use. So the objection farmers sometimes make to repairing their barns,—that they are poor and in debt,—is the very reason why they should repair them. If they are paying six per cent. interest on their stock, they can ill afford to lose twice as much more in keeping it. Cold barns will make a *farmer* poor, as well as his cattle. A merchant or mechanic would grow poor fast enough if he wasted ten per cent of his stock. No wonder, then, farmers grow poor who waste often more than ten per cent. of all their hay, by keeping their cattle in *cold, open barns*. The farmer had better sell a ton or two of hay, (if he cannot do it without,) and get some money to make his barn warm.

We have seen cold stables made quite comfortable by boarding them up on the inside, three or four inches from the outside boards, and filling the intermediate space with straw. The front side of the stable should also be boarded up, leaving a space open to feed the cattle, which may be kept open or closed, according to the temperature of the weather. This is a very cheap method for those who cannot build new barns, or make thorough repairs upon old ones; and it is only necessary to have it accomplished, that the farmer should *go about it*. It may be done at any season of the year, in fair weather or foul. Farmers, in what manner can you more profitably invest a few dollars? You have, perhaps, a warm kitchen, and find it much less expensive providing fuel for it than for a cold one, besides being much more comfortable for your family. You will find there is as much economy in having a warm barn, as in having a warm kitchen; and although the comfort of your cattle is not to be compared with that of your family, yet it should not be forgotten. Could the dumb brutes speak, they would tell many sad tales of suffering;—yes, and they would *argue*, too, more *feelingly* than ever a stump speaker could, in favor of *protection*. JOHN TUFTS. *Wardsboro', Vt., Jan.*, 1849.

Kentucky Wild Lands.

EDS. CULTIVATOR—I saw a piece in a late Cultivator under this head, praising the blue-grass pastures of Kentucky, and a careless reader might be left to infer that these wild lands would make such pastures. Too much praise cannot be bestowed upon the blue-grass pastures of Kentucky; and perhaps it may not be known abroad, that lands that will produce those first-rate pastures, are worth about fifty dollars an acre, whether in a wild or cultivated state. It is true there is much land in Kentucky that can be bought for ten cents an acre, and more than half the land in the state under ten dollars an acre.

Some years ago I bought a large tract of mountain land, at what I supposed to be a very low price. This land has upon it the finest timber, rich beds of coal, and abundance of iron ore. But I thought when I bought it, I could make of it a fine grazing farm. I sowed upon a small part of it, abundance of various kinds of grass seeds. The blue-grass and clover took well and thrived tolerably. But the blackberry brier, sassafras, dogwood, oak, and hickory, took better, and grew so that I had to clear the land every year. After a few years I gave it up, and for ten years past it has not yielded me one cent in rent or profit. The timber would be valuable if it was in the right place; so would the coal and iron be; but they are of no value there, because there are plenty of those articles in places that are more easily got at. If the timber was sawed into plank and lumber, it would cost as much to haul it to any place where it would sell, as it would bring. It is the same case with the coal, which would have to be wagoned seven miles over a bad road, and come in competition with coal mines upon the Kentucky river, with coal that is now sold at four cents a bushel.

I think it probable that some of the Kentucky wild lands might be made tolerable grazing lands for sheep, as the sheep would assist in keeping down the bushes. The bushes, if neglected one year upon my mountain land, would so overshadow the grass as to either kill it or render it so feeble as to make it worthless. The blue-grass succeeds best on the mountain slopes, below the limestone cliffs. The mountains upon my place are composed of limestone and sandstone rocks. The limestone occupies the first slope from the creek, and after passing up some distance the free-stone commences, and continues to the top of the mountain. The top of the mountain is generally capped with a perpendicular sandstone rock, varying from a few to several hundred feet high. Upon the top, where the ridge is level, the soil appears to me to be quite good for that region. I have made no experiment with the ridges, but suppose they will be found nearly as valuable for agricultural purposes as any part of the mountains.

The mountains are generally easily fenced, as those perpendicular sandstone rocks will afford most of it. I am acquainted with localities where thirty pannels of fencing will inclose five hundred acres, with the assistance of the cliff. SAM'L D. MARTIN. *Near Colbyville, Ky., Jan.* 3, 1849.

Culture of Spring Wheat.

EDS. CULTIVATOR—Should you think the following method of raising spring wheat worth communicating to the public, it is at your service. My land is generally a gravelly loam, some of it pretty dry. I plow meadows or pastures late in the fall or early in the spring; be sure it is well done. Go on to it before sowing with the harrow. Smooth it down well; sow from four to five pecks to the acre, (Black Sea wheat.) When the wheat is well up, sow on from 80 to 100 lbs. plaster to the acre. I have never failed of raising from fifteen to 25 bushels per acre. There is one advantage in Black Sea Wheat; it never rusts or smuts, with me.

Owing to the continual wet weather the past season, while my wheat was filling, it was not so good as usual, though I never had a better growth; but it was badly lodged. Yield, about 18 bushels per acre. I have been in the habit for several years, of raising nearly all my grain on an inverted sod. Always plaster—sometimes throw on manure, and harrow in with the grain. If the land is rich, this will cause the grain to grow too large. I consider that while the sod is undergoing the process of decomposition, it facilitates the growth of any kind of grain, almost, if not quite equal to any manure whatever. Acting upon this principle, I turn over pastures and meadows often, and think every time I do so, I add a dressing of manure. TIMOTHY BEAMAN. *Burke, Franklin Co., N. Y., Jan.* 16, 1849.

Offspring of the Buffalo and Domestic Cattle.

In an article on the American bison or buffalo, in our January number, we said that there had been instances of its having bred with the domestic cattle, but that, so far as we learned, the hybrid offspring was incapable of procreation. This, we believe, is the conclusion which has been generally held on the subject. For the purpose, however, of obtaining positive information on the point, we wrote to THOMAS ALLEN, Esq., of St. Louis, Mo., who has very kindly transmitted to us the following letter, which he received in answer to an inquiry addressed to Col. O'FALLON. By this letter it will be seen that the progeny resulting from an union of the buffalo and domestic cattle, has proved fertile.—EDS. CULT.

DEAR SIR—I am just in receipt of your note of the 16th, requesting information in relation to the cross of the buffalo with our domestic cattle. I once owned a half-blood buffalo cow, with a calf by a common bull, but was unable to domesticate her, which I attempted with the view of ascertaining how far the richness of her milk would compare with that of the domestic cow; its bag was quite small, as was its calf, which I raised to maturity. This cow with its calf, was brought to my farm with the greatest difficulty, from Jefferson county, in this State; but some two months after, in attempting to confine her, for the purpose of milking her, she broke away from all the force I possessed, leaped my post and rail fence, and returned through the city to her place of nativity, some thirty miles distant, leaving behind her calf. Hearing that she was there troublesome, I authorised her to be shot. My female buffaloes were inoffensive, tame and gentle; the males, when grown, were violent, vicious, and most dangerous; would readily break through any of my enclosures, or gates, in pursuit of my cows, preferring them to the buffalo cows.

In the course of twelve months, ten of my most valuable cows and heifers, having died, incapable of parturition; and my buffalo cows having also died from neglect or some other cause, I was induced to dispose of my bulls. No consideration would induce me again to own one. There cannot be a doubt that the cross of the buffalo with our cattle, is capable of procreation. J. O'Fallon. *St. Louis, Mo., Dec.* 8, 1848.

Early Peas.

This is the time to prepare for raising early vegetables. Hot-beds may be prepared for radishes, lettuce, cucumbers, tomatoes, &c. Peas may be planted in the open air, on warm ground, any time this month. We shall not be likely to have frosts of sufficient severity to kill plants of this kind, after the ground has been fairly thawed and settled. The *Prince Albert* is considered the best early variety of peas; next to this, the *Early Washington.*

A writer in *The Horticulturist* describes a mode of raising early peas, which is worthy of trial. He prepares troughs of rough boards, like a common sheep trough, eight feet long, and about eight inches wide at the top. These troughs are filled with good soil, and a row of peas planted in each of them. They are then placed in a green-house, or in a common hot-bed. His hot-bed frames are made in a cheap manner. He uses common cotton cloth instead of glass, for lights; which it is stated are as good as glass for most purposes, and cost only a fifth as much. After the cotton is stretched on the frames, it is made transparent and durable by coating it with the following composition: "three pints best old boiled linseed oil, four ounces white resin, and one ounce sugar of lead. The oil and resin must be a little heated to make them mix, and the sugar of lead must be first ground with a little of the oil, and then mixed with the remainder." A coat of this composition is given the canvass lights every season before using them.

It is only for *extra* early peas that it is recommended to put the troughs in hot-beds or green-houses. The writer alluded to says—"For my main crop of early peas, which I start about the first of March, I use nothing but the frame and the canvass lights which cover it. This gives warmth and shelter enough for peas; for a crop in the trough is growing every day with little or no attention, while in the open ground they have scarcely vegetated."

The mode of transplanting from the trough is described as follows: "As soon as the weather becomes mild and fine—say by the first of April, I prepare a spot in the kitchen garden, in which to *transplant* my early peas. This is very easily done by making a slight trench, just large enough to take in the whole trough—fill the earth up to the sides of the box, knock away the ends, and then carefully drawing out the sides, press the mellow soil up to the earth in the trough, as the sides are drawn away. By watering the troughs beforehand, and doing the work nicely, the peas will never know they have been transplanted." It is said that peas may be obtained in this way two or three weeks earlier than can be grown wholly in the open air.

Hussey's Reaping Machine.

In the *Ohio Cultivator*, I observed an article headed "*Hussey's Mowing and Reaping Machine—Hussey's Patent,*"—in which the editor informs his readers, that the patent, covering my "*cutting apparatus, expired a year ago,*" and that any one can now build machines embracing that principle. Ketchum, in particular, who has copied my cutting apparatus in his mowing machine, is urged to "*go ahead.*" The editor is rather too fast; it is true that my original patent has expired, but the subject of its extension is now before Congress, and has been reported on favorably, and may probably become a law. It is also true that a patent was granted to me in 1847, for an improvement in the cutting apparatus. This improvement is now considered indispensible, especially in mowing machines. As the improvement last patented by me is embraced in Ketchum's Machine, I do not see how he or any other person can "*go ahead*" in building Hussey's Mowing or Reaping Machines, without infringing on my rights, unless they confine themselves to my original plan, which is now considered an old-time affair, out of fashion, and of little account, when my late improvements can be had.

As the public appear to be uninformed on this matter, and liable to be misled by the article in the *Ohio Cultivator*, I deem it proper to make this statement, as well for the benefit of the public, as to relieve my private character from the imputation of fraud, with those who know me to be receiving compensation for my patent right in the reaping machine. Obed Hussey *Baltimore, Jan.* 16, 1849.

Action of Lime.

Hon. John Delafield, in his address before the Yates County Agricultural Society, made the following remarks in regard to the action of lime. They are worthy the attention of farmers.

"Lime exists in plants in various proportions, viz:—32 per cent of the ashes of oakwood is lime; 27 per cent of the ashes of poplar is lime; 14 per cent of the ashes of peas is lime, and 4 per cent of the ashes of our wheat plant is lime. Lime is an essential constituent of wheat. It *must* therefore be in our soils, or our wheat never can be matured. Lime therefore is a *direct food* for wheat, and so also for other plants.—This important element of our soils possesses several qualities, most essential and highly beneficial to the farmer. For instance, where applied to heavy clay soils, it renders them more open and easily worked, admitting the action of the atmosphere.

"In all soils containing the sulphate of iron, lime will decompose the sulphate of iron, and thereby form plaster of paris; a material well known. When we apply lime in its fresh or caustic state, it acts as a solvent, destroys the texture of matter in contact with it, or changes its nature. But when by exposure to the air this power is lost, and it becomes slacked, then it is food direct for plants.

"Now as to the best method of using lime, farmers are not agreed; and with some hesitation I will state my practice and give my reasons. We see and know that twenty bushels of wheat, if produced from a single acre, will take from that acre about *seven* pounds of lime:—then as a bushel of lime weighs about 72 pounds in a caustic state, it will weigh when slacked, about 100 pounds by the absorption of water; therefore *one bushel* of lime is sufficient for *fourteen acres* of wheat or thereabouts, but as this supply is for one crop only, and as weeds and other vegetation will rob the wheat of its due share, I would apply ten bushels to the acre, and feel that it is sufficient for four or five years.

"It is true that farmers in this country have applied from 60 to 100 bushels per acre, and there may occasionally be a farm where such a dose may do good, but more likely to do harm; at any rate, for the reasons above stated, it seems a wasteful and expensive system. For light soils, I would recommend a mixture of lime and muck, say one bushel of lime to a cubic yard of muck, applying 20 to 25 bushels of this mixture to an acre. But never mix lime with your manure heaps; this is a ruinous practice, because it expels from your manure its chief power; it destroys the ammonia, a salt which it is our aim to preserve."

Berkshire Hogs.

I have occasionally seen articles in your paper decrying the Berkshire hogs, principally on account of their want of size. To such people you may say, that I have a barrow 3 years old, a full blood Berkshire, which will now weigh nearly 1000 lbs., live weight. He was weighed on the 3d of October, and then brought down 880; since which he has improved rapidly, and will doubtless reach the above figures. I have had this breed for seven years *pure*,—descended from hogs brought from Albany and Buffalo, and a boar imported by Mr. Fahnestock, of Pittsburgh, Pa., from England—(the latter a very large animal.) The stock have all been large and very profitable—weighing at seven to ten months old, from 250 to 300 pounds. Several individuals have weighed over 400, and the sire of this present one reached 750. This is, however, much the largest I have yet raised.

I regret exceedingly, that the breed is so unfashionable here, that I shall be obliged to look for a cross from other stock. Wm. Little. *Poland, O., Jan.*, 1849.

Protection of Working Horses—Horse Blankets.

Eds. Cultivator—I am well aware, that I have chosen a subject, with reference to which, among farmers, there exists almost an infinite variety of opinions.

One will tell us, to keep work horses *warm and comfortable by means of close stables:* another says, let the stables be pretty *airy*—but, when necessary, blanket your horses. Another says, let your horses have *cold stalls*, for they will endure the cold much better, when taken from the stable. But it strikes us, that the most proper stables for work horses, are those, the temperature of which, is about the same as the surrounding atmosphere; with the walls or ceiling so tight, that cold currents of air shall not be permitted to blow directly on a horse.

There is little danger, I apprehend, of making stables too tight, provided they are well ventilated above.

When a horse has been out in a storm, either in the field or on the road, when he is brought into the stable, like to stand where the wind is continually blowing on him—no more than a laboring man who has come from the woods, in a cold stormy day, would like to have his either warm and sweaty, or cold and wet, he does not dinner table spread for him, in a bark shanty; and destitute of fire. And besides being unpleasant and uncomfortable, it is *decidedly injurious* and detrimental to the health of either man or beast.

It is a great fundamental principle in the physical world, and a fact well known to every chemist, that evaporation, whether it takes place from organized or inorganic bodies—from animate or inanimate substances, is a *cooling process;* and therefore, when the bodies of animals are exposed to wet and cold storms, they need to be protected from suffering injury, from the powerful influence of evaporation.

When I have been exposed to the wet storm, and my garments are filled with water, why do I not dry them on my person, instead of hanging them before the fire? Simply because there would be danger of contracting cold. If I attempt it, I soon perceive that evaporation takes place so rapidly, and such a degree of cold is generated, that my physical system is in danger of receiving a shock, which it is not able to resist or endure without injury; consequently, when nature has aroused its most vigorous reactive energies, they being inadequate to counteract the powerful influence of evaporation, it is obliged to yield to the preponderating influence; and to suffer the penalty of a violent physical law—*a cold.* But if I wrap myself in a thick cloak or blanket, evaporation is immediately checked, and the danger of taking cold is very much lessened.

Thus with the horse. Whenever he has been exercised so violently as to produce a profuse perspiration, he needs to be stationed where the wind will not blow upon him; (as a current of air is one of the prominent causes which influence and increase evaporation) and he needs to be covered with a blanket, until his hair has become so dry that he is not in danger of taking cold.

I know that there are many beings, who pretend to possess claims to humanity, who advocate that animals —horses, cattle and sheep, are so constructed that they can endure the exposure to cold and storms, and the sudden transitions from heat to cold, without injury;—but let the advocates of this theory prosecute their labors during a cold and stormy day, without warming themselves by a fire; and at night lie down upon a cold couch of straw, in an apartment where a good share of the window panes have been broken out—while old Boreas "tunes his harp high;" and prolongs his wintry notes louder and colder, and heaps the chilling snow upon their thin covering; and then tell us, whether or not, such exposures endanger their health. Then let them tell us, whether or not, the howling storms of midnight are injurious to the flesh and blood of which dumb beasts are made.

When I commenced farming operations by myself, the stable in which I kept my span of horses, during the first winter, was quite open and airy—just right as many thought and said, to make animals *tough;* and the consequence was, my horses, which were young and high spirited, now, a good part of the time, appeared *much indisposed.* As the spring approached, each one of them run at the nose, and coughed almost incessantly. I doctored them for the distemper, strangles and the heaves; and when all means proved to be of no desirable efficiency, I began to inquire after the *cause* of their indisposition; and I deliberately came to the conclusion, that for the future, my horses should be better protected from the *cold wind and storms.* Accordingly, I built a new stable, and made the walls tight enough for a store room; and since I have kept my horses in this stable, they have kept in better condition—have eaten less feed, could endure the cold much better—and have not contracted such *violent colds.* I also made a couple of Horse Blankets, of which no teamster should be destitute. I purchased two worsted blankets, about two yards and a-half long and a yard in width; and lined or covered them with strong cotton factory, which was two yards wide and two and a-half long. These were then extended on the barn and painted. After they had become sufficiently dry, a crupper, a waist belt and breast straps were sowed on them, and more *comfortable* blankets for horses I never saw. If a horse is obliged to stand in the storm, as is frequently the case, covered with such a blanket, he is kept dry and comfortable.

They are, also, an article of great durability. Six years ago, I made a pair for my horses; and I have used them with my team, summer and winter to ride on, and they will last six years more.

Perhaps India rubber cloth, lined with such worsted or woolen blankets, would subserve quite as good a purpose as oil-cloth;—but it is doubtful whether, with harsh usage, they would be as durable.

If farmers would be careful to make their stables more comfortable during the winter season, and to provide such blankets as have been recommended for their horses, when they are obliged to stand in the cold wind or storm, they would not contract such violent colds; which too often terminate in the *heaves*, or lay a foundation for some disease, from which the animal never recovers. S. Ed'wds Todd. *Lake Ridge, Tompkins Co., N. Y.*

To Confine Hogs in a Wagon to remove them.

Hogs may be removed almost any distance in wagons without injury, by having a leather strap buckled tight round their bodies immediately back of the fore legs, to which another strap or rope is to be attached, to extend from the lower part of the body of the hog, to the bottom of the wagon, where it is to be made fast, and sufficiently long to enable the animal to stand up or lie down at pleasure.

By the more common method of drawing their feet together and having them tied tightly with a cord, they often suffer injury from lameness, beside the uncomfortable position in which it places them. P. S. *Burlington Co., N. J., Jan.* 29, 1849.

Cultivation of Potatoes.

Eds. Cultivator—I cultivate the Mercer potato as follows. I prepare the ground in autumn by ridging in yard manure. In the spring, as soon as the frost is out, I split these ridges and cross plow plain. I then bring on half-rotted (or more) yard manure and ashes in compost, and deposit this in heaps; the rows of heaps being five feet distant. These heaps are then spread to the breadth of two feet, and immediately ridged up. The ground between the ridges is then harrowed, and then furrowed out with a light machine, drawn by a single horse, having three large cultivator formed blades, at distances of one foot. This makes three deep drills, distant from each other 12 inches. A man then follows with gypsum and charcoal-dust, which is thickly sown. The sets or cuttings are then planted eight inches distant in the drills. These are all covered at once by a hand drag with teeth of such a form and size as will well cover the sets, and drawn by two men walking on each side of this bed of drills. Before the plants break ground, these beds are raked with iron-headed rakes and teeth 1½ inch long. This is a quick operation.

When the plants are well up, they are gypsumed; and when they are still upright, and before they begin to fall, the ridge of covered manure between the beds is split, and this earth and manure is taken up by the spade or shovel, and evenly spread amongst the potatoes in the bed, to the depth of two or three inches. After this operation, the space occupied by the ridge is planted out to cabbages, at three feet in the row. This is the whole cultivation which the potatoes receive.

It is absolutely necessary in this mode, in cutting the potatoes for planting, that the root and the sprout end of the potato should be thrown aside, otherwise they will not come up together, and in consequence will very much impede the raking and after culture.

Having refused the ends, I halve the middling sized potatoes, and quarter the very largest. These cuttings, I thoroughly dry by spreading in the sun for several days before planting. I never mind how early I plant. If I could get a chance, I would do it in February. By this method, I raised 300 and 310 bushels of Mercer potatoes to the acre, not mentioning the cabbages. In this mode, the ground is kept mellow and light, for there is no foot of man or beast set upon the bed after it is furrowed. The potatoes turn of uniform size, if the season is good, and the bed is a perfect mass of well formed roots; and there is not a quarter of the weeds commonly seen in potato crops. Yeoman. *Middletown, Ct., Feb.*, 1849.

Variety of Indian Corn.

Mr. A. G. Moody, of Smithfield, Isle of Wight Co., Va. writes us that he has a kind of corn, called the "South Oregon corn," which he thinks more valuable than any kind he has before cultivated. This corn, it is stated, was brought into notice by the late President Harrison, who received it from the southern part of Oregon, in 1839. Mr. M. describes it as follows: "It is bright yellow; the ears long, with from 16 to 24 rows of grains to the ear; grains from half an inch to three-fourths of an inch in length, and very often longer; cob red, and of small size; stalk remarkably thick. The variety resists the drouth better than any I have noticed before." Mr. M. states that he has tried this corn two years, and he thinks it will yield thirty per cent. more than any kind he has cultivated. He says "it is an early variety, and thinks would suit the northern farmers admirably." In relation to this, we will remark, that it evidently (from the description,) belongs to what is called the southern or "dent" class, and would not, probably, be early enough for our latitude. It is, no doubt, a very good variety for regions to which it is adapted, though we see nothing strikingly different, (except the *extraordinary* length of the grains,) from the yellow red-cob corn that is raised in the southerly part of Ohio and in Kentucky. Mr. M. has some of the seed for sale, at two dollars a bushel.

Composts—Cheap Manure.

Eds. Cultivator—You ask about my compost heap. I live in a large manufacturing town, with a population of 12,000 or more. I have a cart with a tight box, holding 36 square feet. I send this cart out with my oxen, and give the parties driving and filling it 75 cents for a full load of night soil; having first made a basin of dry marsh mud, of which I have abundance, into which this night soil is emptied. We have several large founderies, that use much charcoal; the dust they cannot burn. This dust they give to me; and it only costs me cartage to bring it to my night soil. Again, we have several large factories, that use anthracite coal. I take from them their sifted ashes; this costs me nothing but carting.

Again, we have other factories that use half coal, half wood. For these ashes, I give one cent per bushel. Now I mix all these ingredients into a home-manufactured poudrette. I ought to have said, that to each load of night soil I add one bushel of Plaster of Paris, which, with the charcoal dust and plaster, will render it inodorous.

Next, I buy oyster shells at 3½ cents per bushel; burn them with cedar bush, from a mountain lot I own. One bushel of shells makes two of lime; but I cover the heap with an equal quantity of marsh mud, which, in fact, is a species of turf. And here I have a large source of cheap manure, at one cent per bushel. As for anthracite coal ashes, I am satisfied that on all my lands they are useful, particularly for a top-dressing for fruit trees; and on clay lands, they act mechanically in opening the soil, so that air can get down to the roots of plants.

Our soil is a red decomposed sand-stone; and lime acts most beneficially on it. I prefer small doses, say 40 bushels of slaked lime per acre, repeated every two or three years, with a bushel of Plaster of Paris per acre each year. I have found the waste of a flax-mill, after 12 months' decomposition, very valuable manure. L. L. T. *New Jersey, 24th January*, 1849.

The Veterinary Department

Diseases of Sheep.

Scours and Stretches.—A correspondent (R. G.,) of Jefferson county, Ohio, wishes some information in reference to the cure of these diseases. He states that a neighbor of his has lost 75 out of 150 of his last year's lambs. It is said—"the disease was, perhaps, in the first place, induced by feeding on green frosted oats and clover, late in the fall. Their food and location have been frequently changed. The remarks, directions and remedies, by Mr. Morrell, have been observed and carefully attended to, but without any good effect. Once every day he selects from the main flock all those having any indications of the disease; and most generally his patience is again taxed the succeeding day in like manner. They sink down and die within a few days after the attack."

As to the *stretches*, our correspondent states that it "is troublesome, and fatal, amongst those flocks closely yarded, and fed exclusively on dry feed. However valuable Mr. Morrell's book on sheep may be, (*and I esteem it valuable*,) yet, in regard to his prescriptions for the above diseases, we have not found them of any value. In this latter complaint, the food becomes dry and compact in that part of the internal structure called the manyplus. And I have always found that the quantity of medicine necessary to act as an opiate on this dry mass, will kill the animal. If I am mistaken, I will take it kindly to be set right. A valuable suggestion which I have seen, perhaps in Mr. Morrell's book, is to feed pine tops. Those who are located where they can obtain them, by feeding once or twice a week, will not, as I now believe, be troubled with this complaint. At first, the sheep will reject the pine tops, or, at least, eat sparingly; but by keeping them before them, they will soon grow fond of them."

We should be glad to receive the suggestions of those who are acquainted with this subject. The feeding of pine and hemlock boughs, we have formerly practiced, and think it to be useful. Ed.

Hoove in Cattle.

In a late number of the Cultivator I have read an elaborate article on "Hoove" in cattle. The first time I ever saw the disease was four years since, when a valuable short horned bull was affected. I first observed it about sundown one evening, when they were about stabling the other cattle. The persons then in the yard could not account for or explain the cause of the swelled appearance of the animal. I went to the house and resorted to the books, and discovered it was the "Hoove." The remedies recommended were not ingredients which the farmer keeps about him. About 3 o'clock, P. M., next day, I thought to look at my bull, and found him swelled to an alarming size. I then sought my manager, an Irishman; and on seeing the animal, he asked me if I had a bottle of gin, or "apple-jack." I brought him a bottle of good Holland. He led the bull out by the chain, affixed to a ring in his nose, tied on about a yard of rope, took him to a tree, and brought his head up nearly vertically, by throwing the rope over a projecting limb. I poured the contents of the bottle down his throat, and in two hours he was entirely relieved. In one other case I administered apple spirits, and succeeded in curing the animal. I believe it will be effectual in all cases; and is a remedy almost always to be readily procured. A Plain Farmer. *Paterson, N. J.*, 1849.

We have given spirits with good results, in cases of hoove; but in the incipient stages, we have found alkalies, as mentioned in the article referred to, a better remedy. Eds.

Answers to Correspondents.

Feeding Cows.—D. M. To obtain the greatest quantity of butter from cows, in the winter season, we should prefer feeding them on early-cut hay, which had been well cured. In addition to the hay, we would give some meal. The kinds you mention, corn, oats, and buckwheat, are good. We would mix them in equal proportions, and feed each cow from three to six quarts per day, in two parcels, one in the morning and the other in the evening.

Mr. Crispell's Farming.—"A Subscriber," Frederick, Md. In further answer to your inquiry noticed in our January number, we are informed by Mr. Crispell that he had 20 acres in corn which produced 1,400 bushels; 7 acres in rye (on corn-ground,) produced 49 bushels; 15½ acres rye on fallow ground, 417 bushels; 10¼ acres oats, 300 bushels; 2½ acres wheat, 30 bush.; ¾ acre flax, 8 bu. seed; 2 acres potatoes, 290 bu.; 32 acres meadow, 80 tons hay; 18 acres clover, (pastured) kept 25 head of cattle from 20th May to 1st September. Mr. C. says—"from the above, compared with my account of sales, it will be seen that I reserved for seed, keeping stock, and for family use, 500 bushels corn, 167 bushels rye, 100 bushels oats, 8 bushels wheat, 30 tons hay, 80 bush. potatoes, about 100 lbs. flax, and all my corn-stalks, except 10 loads. The number of cattle wintered was 29; horses and colts six; hogs ten."

Mocha Hogs.—S. B. H. Providence, R. I. The variety of swine to which the name of "Mocho," (properly Mocha,) has been given, are said to have sprung from a boar introduced from the island of Mocha, off the coast of Chili. We are not aware that there are any full-bloods in the country. We have several times seen those which had more or less of the blood. They are not large, but small-boned, and fatten easily. We do not know that they possess any superiority over crosses of the Chinese, or various other breeds.

Mustard.—D. A. W. East Dorset, Vt. A deep rich loam is best for this crop. The method practiced on the Muskingum river, Ohio, is to sow the seed (by drill or hand,) in rows, two feet apart one way—the plants to be thinned to a foot apart in the rows. The crop to be kept clean while growing. The produce per acre is from ten to fifteen bushels, though as much as seventeen or eighteen bushels have been raised.

Devon Bull.—S. M. N., Marlborough, Mass. We do not know where you could exchange your bull. If you conclude to obtain another, we would refer you to George Patterson, of Baltimore; L. Hurlbut, of Winchester, Ct.; R. Cowles, Farmington, Ct.; and E. Phinney, Lexington, Mass.

Rye Meal for Milch Cows.—S. Y. S. Chester,

N. Y. We are unable to point to any analysis showing the value of rye compared with Indian corn, for the production of milk. But we have found rye meal mixed with cut hay, an excellent article for feeding milch cows.

IMPROVEMENT OF SANDY PLAINS.—C. E. N., South Berwick, Me. Clay, ashes, decomposed or rotten manure, with clover, will probably prove the best means of improviug this soil. Plaster is useful in situations where it will act. This can be ascertained by trial.

CORN AND COB-CRUSHER.—B. F. C., Rising Sun, Va. Freeborn's mill can be operated by two horses, and will grind corn or corn and cob into coarse feed. Price, $35.

BLACK SEA WHEAT.—R. G., Willett, N. Y. We think this kind of Wheat maintains its superiority for hardiness and productiveness. It is considered a surer crop than most kinds of spring wheat. It is for sale at the Albany Agricultural Warehouse, at $2 per bushel.

SUNFLOWERS.—L. B., Lexington Heights, N. Y. A deep loam is best for sunflowers. The seed may be planted in hills, after the ground has been prepared, as for corn, about five feet apart. When the plants are up a few inches, they should be thinned to three in a hill, and when they are a foot high, all but one should be pulled up. The ground should be kept clean with the cultivator. There are two varieties; one of which bears several flowers on branches of the same stalk, and the other a single large flower on the top of the main stalk. The latter is best. The seed is good for poultry, and for sheep. We have heard of 40 to 50 bushels being produced on an acre.

Domestic Economy, Recipes, &c.

BREAD PUDDING.—I noticed in the January number of "The Cultivator," a polite invitation to Farmers' wives and daughters to furnish for publication forms and recipes for cooking. My wife is neither a farmer's wife nor a farmer's daughter, but she has some taste in culinary affairs. For desert this noon, we had a "bread pudding," which I thought so nice as to inquire into the method of preparation. She sends you the following:

Take bits of dry bread—sufficient quantity to absorb three pints of milk, and form a smooth thick batter; add a piece of butter (melted) the size of a hen's egg, two beaten eggs, and the grated rind of a lemon. Bake about three-quarters of an hour. Eat with sugar and butter. J. B. *Springfield, Feb.* 6, 1849.

EDS. CULTIVATOR—My wife sends a few recipes:

A SEASONABLE HINT—SNOW CREAM.—Take any quantity of cream, varying according to the number designed to partake—say a pint, more or less. Add pure snow, i. e., snow free from ice or hail, until of a proper consistence; stir in pulverized white (brown will do) sugar, sufficient to sweeten it. Apply a few drops of essence of lemon, vanilla or rose water. Eat before melted. This is superior to ice-cream, and accessible to any farmer, and a very innocent luxury.

TO MANUFACTURE KISSES.—Beat whites of three or four eggs to stiff froth; add one-half pound pulverized white sugar, and a few drops of essence of lemon. Of this, drop a teaspoonful on white paper, and place on buttered tins, and dry in a moderately heated stove. Cool and eat.

MOCK CHICKEN PIE.—Boil common potatoes—season highly with salt and pepper; some prefer a little thyme or summer-savory. Pour milk over them, and stir till of a moderate paste; fill a pie dish with crust below and above the contents. Some strew pieces of pork through it. Bake in an oven, and serve hot. A single crust, filled and doubled, is called *tnrn-overs.* L. T. DUFFELL. *Jacksonville, N. J., Feb.* 7, 1849.

Agricultural Societies.

DELAWARE STATE AG. SOCIETY.—A convention has lately been held, and a society organized in this state. Peter F. Causey, President; John D. Dilworth, H. Ridgely, T. P. McColley, Vice-Presidents; Manlove Hayes, Jr., Rec. Secretary; A. M. Higgins, W. Duhamel, P. N. Rust, Corresponding Secretaries; Wm. Burton, Treasurer.

JEFFERSON COUNTY, N. Y.—Officers for 1849. Moses Eames, President; E. S. Massey, Secretary; O. N. Brainard, Treasurer. At the last meeting of this society, premiums were awarded on the oat crop as follows; first premium, 110 bushels per acre; second, 90 bushels per acre.

CAYUGA COUNTY, N. Y.—C. Gridley, President; John B. Dill, Secretary; C. Parsons, Treasurer; with one Vice-President for each town in the county. The Society is in a flourishing condition.

NIAGARA COUNTY, N. Y.—Erastus Hurd, President; A. H. Moss, Lockport, Secretary. This society proposes to procure a lot on which to erect buildings and other necessary fixtures, for the purpose of holding the exhibitions of the society.

ONEIDA COUNTY, N. Y.—Henry Rhoades, President; Plyment Mattoon, Rob't Waterman, Vice-Presidents; L. T. Marshall, of Vernon, Secretary; A. G. Gridley, Treasurer. Premiums were awarded at the annual meeting of this society for the following crops; 48 bushels winter wheat, 30 do springwheat, 83 bushels oats, 54 bushels barley, 114 bushels Indian corn, (four other crops of corn from 89 to 98 bushels,) 54 bushels buckwheat, 1324 bushels carrots, each grown on 1 acre.

CORTLAND COUNTY, N. Y.—Peter Walrod, President; Charles Taylor, Alfred Chamberlain, Moses Kinney, Chauncy Morgan, Vice-Presidents; Geo. J. J. Barber, Secretary; Amos Hobart, Cor. Secretary; Ira Bowen, Treasurer. This society paid premiums for the following crops; 87 bushels Indian corn, 82½ bush. oats, 720 bush. ruta-baga, each raised on one acre; also for 136½ bushels carrots, raised on an an eigth of an acre, being 1092 bushels per acre, also a second premium for carrots, for a crop at the rate of 900 bushels.

RENSSELAER COUNTY, N. Y.—E. N. Pratt, President; Wm. Buswell, George Vail, Abram Van Tuyl, Alex. Walsh, Isaac Tallmadge, Daniel Fish, Joseph Haswell, Joshua S. Lewis, B. B. Kirtland, Z. P. Burdick, George T. Dennison, George W. Glass, James Turner, John Mesick, James T. Davis, Richard J. Knowlson, Dennis Belding, Vice-Presidents; John J. Viele, Recording Secretary; John Fitch, Corresponding Secretary; Frs. N. Mann, Treasurer.

NORFOLK COUNTY, MASS.—An agricultural society has recently been organized in this county. The officers are—Marshal P. Wilder, President; Chas. Francis Adams, Samuel D. Bradford, Ebenezer Burgess, Benjamin V. French, Cheever Newhall, Josiah L. Richardson, Vice-Presidents; Edward L. Keyes, o. Dedham, Recording Secretary; Edgar K. Whittaker, of Needham, Corresponding Secretary; Enos Ford, Treasurer. A committee was chosen to collect funds for the society. The following donations were obtained, viz: From Chas. F. Adams. $300; Marshall P. Wilder, $100; B. V. French, $100; Aaron D. Williams, $100, and $270 from subscription members, at $5 each. Different towns were pledged to raise the following sums: Roxbury, $500; Dorchester, $400, Needham, $100; Quincy, $100; Dedham, $300; Dover, $50; Wrentham, $200; Milton, $100.

Notes for the Month.

Communications have been received, since our last, from E. C. Frost, W. C. W., Wm. Freeland, F. Holbrook, J. S. Pettibone, John Tufts, Rob't. M. Marshall, Wm. Little, P. S., Yeoman, Agricola, Practical Farmer, D. G. Williams, J. L. Childs, A Book Farmer, Timothy Beaman, Prof. E. Emmons, A. G. Moody, Wm. Bailey, Subscriber, Prof. Robert Peter, J. McKinstry, H. C. W., Dennis Johnson, Dean, James Eaton, R. G., Isaac Hildreth, F. Holbrook, A. Wanzer, A Farmer's Daughter, Chas. Betts, S. H. Reed, Chas. E. Norton, S. T. Duffell, N. P. A., B. A. Hall, J. B. Dill, Pennepack, W. C. B., J. J. Craig, W. A. Tryon, P. S. Bunting, S. Gillespie, A. C. Richards, W. R. W., G. A. Hanchett, P. Wing, O. P. H.

Books, Pamphlets, &c., have been received, since our last, as follows:—Geographical Memoir upon upper California, with a map of Oregon and California, by J. C. Fremont, from Hon. J. W. Bradbury, U. S. Senate.—Report of the Ohio Pomological Convention for 1848. Elements of Agriculture, for the use of Schools, translated from the French, by F. G. Skinner, and Sheep Husbandry in the South, by H. S. Randall, from J. S. Skinner, Esq.—Judge Beatty's Essays on the Agriculture of Kentucky, from Lewis Sanders, Esq.—Proceedings of the Penn. Hort. Society, and list of premiums for 1849, from Thomas Hancock, Esq.—Catalogue of Western Reserve College for 1848-9.—Transactions Essex (Mass.) Ag. Society for 1848, from J. W. Proctor, Esq.—Report of the Boston Water Commissioners, on the material best adapted for water pipes, from Prof. Horsford.—The Safety Mask, or Prophylactic Protector from diseases produced by contagion, infection, or malaria, by John Lewis, of Kentucky, the inventor, from the author.—Catalogue of the Mount Airy Ag. Institute, from the Principal, John Wilkinson, Esq.—Flower seeds, from T. Reid, Little Fort, Ill.

☞ We tender our grateful acknowledgments to our numerous correspondents, for the liberal contributions with which we have been favored the present winter. Some of them, of course, must be delayed; but we beg our friends, whose favors are laid over for a month or two, not to consider that it is done because we consider their favors less valuable than those published. We endeavor to make a fair selection for each month, so that one number shall about equal the others. Among the papers filed for our next No., are those of Prof. Peter and Dr. Martin, of Kentucky—Mr. J. S. Pettibone, Mr. J. M'Kinstry, H. C. W., Pennepack, and many shorter ones, for "The Farmer's Note Book," and other departments of the paper.

Premiums.—In our next, we shall publish a list of the persons, to whom our premiums for subscribers, received previous to the 20th of March, are awarded.

Nursery Catalogues.—It would give us pleasure to comply with the requests of our friends for these Catalogues, were it in our power; but we have not had a copy from any nursery for a long time.

Hereford Beef.—We lately saw five head of fine Hereford cattle, owned and fattened by Mr. Edward Wells, of Johnstown, N. Y. There were four steers, coming four years old, and one cow. They were all from the former herd of Messrs. Corning and Sotham. The steers were reared in the ordinary way, on hay and grass, and have only been stall-fed about three months. They are large and well-shaped, and have fattened remarkably well for the time they have been feeding. The cow has been an excellent breeder, but has become somewhat in years, and having failed to have a calf last season, it was thought best to fatten her. The fine condition of these animals supported the high character which the Herefords maintain in England, for beef. Mr. Wells has several choice breeding animals of this breed.

"North American Pomological Convention."—A circular has been issued by "the Committee of the North American Pomological Convention," which has been supposed, by many persons who have received it, to have emanated from the New-York State Agricultural Society, as we learn from several letters from gentlemen to whom it was addressed; and we see by the Cleveland Herald, that Professor Kirtland, in declining the appointment conferred upon him by that circular, alludes to the appointment as having been made by "the N. Y. State Ag. Society." Under these circumstances, it is proper that we should say that the New-York State Ag. Society had nothing to do with the circular in question, nor with the appointment of the committees named therein; nor do we suppose it to be the intention of the State Ag. Society to extend its operations beyond the limits of the State.

Albany Agricultural Warehouse.—By the advertisement of H. L. Emery, it will be seen that he has re-established himself at the spacious new building lately erected on the site of the Townsend House, 369 Broadway. He has here collected a large assortment of implements, all of which are entirely new, and of the most approved construction. He is therefore prepared to supply every article in his line of trade, at the shortest notice. Farmers visiting the city, will find the establishment worthy their attention.

Chemical Manure.—Attention is invited to the advertisement of the "George Bommer Manure Company," in this paper, who contemplate, it will be seen, furnishing farmers and gardeners with a superior article of concentrated manure. It is a subject with which Mr. B. has been long familiar, and if he shall succeed in furnishing an article of good and uniform quality, there must be a large demand for it.

Sale of Ayrshire Cattle.—We invite attention to Mr. Bement's advertisement in this number, of his Ayrshire stock. Several of the animals offered have taken premiums at the shows of the N. Y. State Ag. Society. The Ayrshires are a good breed for the dairy, and better adapted to light soils than the Short-horns.

Lawrence Scientific School.—This school, which is attached to Harvard College, Cambridge, Mass., continues in successful operation. The second term for the year 1848-'49, commences on the first of March, and will end on the 14th of July. Prof. Horsford will lecture upon Theoretical and Experimental Chemistry twice a week, from the second of April to the close of the term. Excursions will be made in term time to manufacturing establishments in the neighborhood, where the practical application of chemistry to the arts may be observed. Prof. Horsford will continue to receive special students to the course of experimental instruction in Chemistry, who will give their attendance in the laboratory from 9 o'clock A. M. to 5 o'clock P. M. The course will be modified to meet the wants of those designing to pursue practical analysis, manufacturing, metallurgy, medicine, engineering, agriculture, or instruction, and proportioned in duration to the objects and previous acquisitions of the student.

Prof. Agassiz will lecture on Zoology; Prof. Wyman on Com. Anatomy and Physiology; Prof. Gray on Botany and Vegetable Physiology; Prof. Webster on Mineralogy and Geology. For particulars inquire of Prof. E. N. Horsford, Cambridge, Mass.

Death of a Friend of Agriculture.—The Maine papers mention the demise of Payne Wingate, Esq., of Hallowell, Me. He was a close student of nature, in all the forms to which she was accessible to his observation, and was remarkable for the extensive fund of knowledge he had collected, under comparatively limited opportunities. He was ardently devoted to the interests of agriculture and horticulture, in which he rendered the community important benefits,—though laboring for years under infirm health. A letter lately received from James L. Child, Esq., of Augusta, thus notices his death: "Our old friend Payne Wingate, *is in his grave*—quite a loss, I assure you, to several of us, who often visited him, to talk over matters and things in general, touching the interests of agriculture, &c."

☞ We hear with much regret, of the death of Mr. Thomas Noble, of Massilon, Ohio. Mr. N. was one of the best and most successful farmers with whom we have ever been acquainted. He was an Englishman, but had resided on the farm where he died for several years, and had been of great advantage to the section by the excellent examples he gave in the various departments of husbandry. His name will be recollected as an occasional correspondent of the Cultivator.

☞ About a page of "Monthly Notices," are necessarily deferred till next month.

Prices of Agricultural Products.

New-York, February 15, 1849.

FLOUR—Genesee, per bbl., $5.87½a$6—Fancy brands, $6.25a $6.75.

GRAIN—Wheat, per bush., $1.15a$1.30—Corn, Northern, 64a 65c.—Southern, 55a60c.—Rye, 66c.—Oats, 34a36c.

BUTTER—best, per lb., 20a22c.—western dairy, 15a18c.

CHEESE—per lb., 6½a7c.

BEEF—Mess, per bbl., $11a11.25—Prime, $7.50a$8

PORK—Mess, per bbl., $11a$11.25—Prime, $10.25.

LARD—per lb., 6¾a6⅞c.

HAMS—Smoked, per lb., 7c.

HEMP—American dew-rotted, per ton, $155a160

TOBACCO—per lb., Kentucky, 2½a7.

COTTON—Upland and Florida, per lb., 6½a7⅞—New Orleans and Alabama, 7⅛a8½c.

WOOL—(Boston prices) Prime or Saxon fleeces, per lb., 35a 40.

American full blood Merino,	31a33c
" half blood do.,	26a29c
" one-fourth blood and common,	24a26c

Remarks.—Flour is firm, with a steady demand at the prices given. Beef, pork, and lard are rather dull, and prices have lowered within a few days.

Fruit Scions.

THE subscriber will be prepared to furnish scions for this season's grafting of the celebrated fruits of Western New York.

"Northern Spy,"
"Norton's Melon,"
"Early Joe,"
"Jonathan,"
"Swaar,"
} Apples.

All orders, post paid, shall have immediate despatch. Price per hundred $1. Can be sent by mail or express.

JAMES H. WATTS.

Rochester, N. Y., March 1, 1849,—1t.*

Isabella Grapes,

OF proper age for forming vineyards, propagated from and containing all the good qualities which the most improved cultivation for over 12 years, has conferred on the vineyards at Croton Point, are offered to the public. Those who may purchase, will receive such instruction as will enable them to cultivate the Grape with entire success, (provided their location is not too far north.) All communications, post paid, addressed to R. T UNDERHILL, M. D., 310 Broadway, New York, will recieve attention. He feels quite confident that he has so far meliorated the character and habits of the Grape Vines in his vineyards and nurseries, by improved cultivation, pruning, &c , that they will generally ripen well and produce good fruit when planted in most of the northern, and all the western, middle and southern states.

March 1.—1t.*

Mt. Hope Garden and Nurseries,

Rochester, N. Y.

THE Proprietors of this establishment solicit the attention of amateurs, Horticulturists, Nurserymen, and dealers in Trees, to their present large stock of well grown, thrifty and healthy fruit trees—comprising the very best varieties of

PEARS, APPLES, CHERRIES, PEACHES, PLUMS,

And all other fruits. Their stock of

Dwarf Pears, Apples and Cherries,

For Garden Culture, is the largest in the Union. The Stock of

ORNAMENTAL TREES

Is also very large, and can be furnished at low prices.

Our stock of NORTHERN SPY Apple trees is the best in this country, and we now offer them at reduced prices. Trees 5 to 9 feet high, $25 per 100; 2 to 4 feet, $12 per 100, and less per 1,000.

ROSES, including the very best varieties. Our stock of *Hybrid Perpetuals* is particularly large. *Red Moss*, fine plants on their own roots, $18 per 100. Of PHLOXES we have a splendid collection, including all the newest and best kinds.

HEDGE PLANTS, such as Privet, Buckthorns, Osage Orange, Norway Spruce, Hemlock, American Arborvitæ, Red Cedar, &c.

STOCKS FOR NURSERYMEN.

70,000 Pear Stocks, one and two years old.
80,000 Quince do., fit for budding next summer.
20,000 Paradise do. do do
15,000 Prunus Mahaleb, do do
100,000 Plum do do
1,000 English Gooseberries.

One of the proprietors is now on his return from Europe, with an immense stock of trees, plants, &c. We will enumerate only a few of them, viz:

30,000 Norway Spruce, 1 to 2 ft.; 12,000 Scotch Firs, 1 to 2 ft.; 10,000 European Larch, 1 to 2 ft.; 3,000 Austrian Pines, 1 to 2 ft.; 2,000 Pineaster Pine, 1 ft.; 3,000 European Silver Firs, 12 to 15 in.; 1,000 Siberian arborvitæ; 1,000 Tree Box, 5 different varieties; together with a great variety of Rhododendrons, Auracarias, Deodar Cedars, Cedar of Lebanon, Belgian Azalias, *Spiræa prunifolia, flore pleno*, Berberries, Tree Pæonias, &c., &c.

Priced lists of the above, together with a great variety of new Evergreens, Shrubs, Roses, &c., will be forwarded to all *post paid* applications.

All orders promptly attended to in the best manner. Catalogues forwarded to all *post paid* applicants.

March 1, 1849.—1t. ELLWANGER & BARRY.

Country Seat and Fruit Farm for Sale.

THE subscriber, compelled by ill health to relinquish the cares of business, offers for sale the "Belmont Farm," on the banks of the Passaic, oppposite Belleville, New-Jersey, eight miles from New-York, and three and a half from Newark. The farm contains 72 acres—9 in woodland and the remainder under cultivation, with a front of 1,200 feet on the river—and springs of good water crop out on the upper part of it, forming a small stream, which runs through it at all seasons. It has upon it a comfortable stone house, new milk house, new bath house, a good barn, corn house, &c.; a number of young thorn and evergreen hedges; a new wharf, where vessels can discharge cargo (manures, &c.) at all stages of tide; and a fine fishery, where from 2,000 to 3,009 shad are caught annually. The grounds afford several superior building sites, combining beauty, extent and variety of prospect, with ease of access, contiguity to shade and woodland, and a finely diversified local landscape, should the purchaser be desirous of building a cottage or villa to suit his own taste.

Fruit.—Besides some hundreds of apple, pear, quince, cherry, and peach trees, in full bearing, there are about four thousand young fruit trees propagated by the proprietor, from the choicest varieties, obtained from the most reliable sources, (chiefly from the Highland nurseries of Messrs. A. J. Downing & Co.) 2,000 of them have been set out with great care in "borders" well prepared, among which are—1,250 peach trees, (1,000 of them come into full bearing this year) Kinds:—George IV., Snow, Early Tillotson, Druid Hill, Early York, Crawford's Late, Late Red Rareripe, Late Heath Cling, Large White Cling, Malta, Brevoort's Morris, &c. 500 apple trees—Newtown pippin, Rhode Island Greening, Esopus Spitzenberg, Baldwin, Yellow Belle Fleur, Strawberry, Lady, Fall Pippin, Bush, Gloria Mundi, Alexander, Dutch Mignonne, Gravenstein, Swaar, Northern Spy, &c.—(50 varieties.) 900 pear trees, mostly Columbia, Beurre d'Aremberg, Passe Colmar, Winter Nellis, Glout Morceau, Bartlett, Dearborn's Seedling, Early Bloodgood, &c.—(100 rare varieties, one tree of a kind) 1,000 Dwarf Pear Trees on Quince stocks—mostly Duchesse d'Angouleme, Beurre d'Aremberg, Dix, Bartlett, Urbaniste, Bonne Louise de Jersey, Beurre Bosc, Van Mons' Leon Le Clerc, Columbia, Bezi de la Motte, Flemish Beauty, Knight's Monarch, &c —(part in bearing.) 100 Isabella Grape Vines. 200 Cherry, Plum, and Quince trees and a selection of miscellaneous large and small fruits, ornamental trees, &c. Also, 4,000 pear stocks; 1,000 mountain ash stocks for pears

As a fruit farm this place offers great advantages to any one wishing to cultivate fruit for the New-York market In beauty and variety of scenery, in healthfulness of climate, in the intelligence and morality of its population, in short, in all those considerations which combine to render the region attractive and desirable as a family residence, it is believed that the vicinity of Belleville possesses advantages not surpassed by any other place in the neighborhood of New-York. One half the purchase money can remain on mortgage, if desired. For further particulars apply on the premises, or by mail to L. S HASKELL, Belleville, N J., or to HASKELL & MERRICK, 10 Gold-st, New-York

March 1—1t.

To Nurserymen, Gardeners, and Horticulturists generally.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes, by a strict attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq., and A. Saul & Co., Newburgh; H. Reid, Murray Hill, N. Y., and Elizabethtown, N. J.

GEO G. SHEPPARD,
143 Maiden Lane, New-York.

N. B. Orders for Russia Mats, for Budding or Packing, immediately supplied. New-York, March 1, 1849.—2t.

Fruit Trees.

THE subscriber would announce to the public that he has for sale at his nursery, a general assortment of Fruit Trees, embracing nearly all of the choicest kinds, all of which have been obtained from the most reliable sources, or from bearing trees of well known varieties, and propagated with his own hands in the most careful manner; and a large quantity have been proved on his own grounds. His stock of apples especially, is unusually large and fine, and will be sold at reasonable prices, with a liberal discount to nurserymen and venders of trees. Persons at a great distance, wanting small trees, will be supplied at a corresponding price.

Scions for grafting or budding, of all the most rare and scarce varieties, at $1 per 200, with a discount where 50 or 100 varieties are ordered. And large quantities of the more plentiful kinds, at reduced prices, in proportion to quantity.

Red Antwerp Raspberries by the 1,000, cheap.

Catalogues gratis to all post paid applicants.

Canterbury, Orange Co., N. Y.,—2t. C. HAMILTON.

Advertisement.

READING ROAD NURSERY, near Cincinnati. For Sale the entire stock of Trees, Shrubbery, Evergreens, Hardy and Greenhouse Plants, together with all the tools, implements, Buildings, Lease, &c., offering one of the best openings in the West, to any person desirous of engaging in the above business, being now in successful operation, with every facility for carrying on an extensive business.

The land contains nearly 10 acres of ground, handsomely situated, fronting on the Springfield and Cincinnati turnpike, 1¼ miles from Cincinnati.

If not previously disposed of by private contract, the whole will be offered at Public auction, the stock of Hardy Fruit and Ornamental Trees, Evergreens, Shrubs, &c., on the 2nd of April; the Greenhouse Plants, Buildings, Tools, Implements, Lease, &c., &c., on the first of May.

Further description is deemed unnecessary, it being presumed that persons wishing to purchase will call and examine for themselves. Letters of inquiry, to receive attention, must be post paid. Address, W. HEAVER, Reading Road Nursery, Cincinnati, O.

March 1, 1849—2t.

TREES! TREES!

COMMERCIAL GARDEN AND NURSERY

Of Parsons & Co., Flushing, near N. Y.

THE Proprietors of this Establishment, invite public attention to their large assortment of every desirable variety of

FRUIT AND ORNAMENTAL TREE OR SHRUB.

Their importations of everything new in Europe are annually continued, and they offer a very large variety of

ORNAMENTAL TREES AND SHRUBS,

imported expressly for arboretums and pleasure grounds. Their collection of Roses is annually enriched by novelties from abroad, many of which may be found described in their new work on the Rose, recently published.

FRUIT TREES

Receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors, at Flushing, near New-York, where Catalogues will also be furnished.

They have formed a branch at Brighton, near Boston, and by the entire success of their trees transplanted thither, have thoroughly proved the superior adaptation of Long Island trees to the soil and climate of any part of New England.

At the season of transplanting, a salesman will be at this branch to furnish those who may prefer obtaining their supply thence.

March 1.—2t.

Thorp, Smith & Hanchett,

(*Late Thorp & Smith*,)

Proprietors of the SYRACUSE NURSERIES,

HAVE now ready for sale a very extensive stock of the most valuable kinds of FRUIT TREES, embracing most of the standard varieties, (including those most highly approved and recommended by the late Pomological conventions at New-York and Buffalo,) which, in *vigor, thriftiness and symmetry* of growth are not excelled by the productions of any other nursery in the State. Having more than *forty acres* now chiefly devoted to the cultivation of FRUIT TREES, they are prepared to sell at WHOLESALE *as largely*, at prices *as low*, and on terms *as reasonable*, as any other nursery establishment here or elsewhere. The superior quality of their trees must contine to recommend them to amateurs, who desire to unite ornament with utility; and to orchardists, whose chief aim is to obtain such only as are healthy and vigorous.

They have also, a large assortment of finely formed ORNAMENTAL TREES, and several thousand *Seedling Horse Chestnuts*, at very moderate prices.

Orders will be promptly attended to, and trees packed safely for transportation to any distance.

☞ Catalogues furnished *gratis*, to all *post-paid* applications. They may also be obtained, and orders left at the store of M. W. Hanchett, between the Railroad and Syracuse House.

Syracuse, March 1, 1849 —3t.

Wm. Reid offers for sale this Spring,

At his Nurseries, Murray Hill, 37th Street, and 4th Avenue, New-York, and Elizabethtown, N. J.

A General assortment of Fruit and Ornametal Trees, Shrubs, &c. Also, a good stock of Roses, Isabella and Catawba vines, several thousand yards of Box, two years grown, bushy, and in fine order for laying edgings. The stock of Fruit also at the Elizabethtown Nursery, is very extensive, and probably contains as large a stock of Pears, Apples, &c., as can be found at any other Nursery establishment in the United States. All the fruit trees, &c., are grown and strictly attended to by the proprietor in person, which prevents in a great measure, any mistake or doubt that always attends imported trees; and all of the fruit trees, intended for orchard planting; are always invariably worked on good seedling stocks. Also, most of the new varieties of fruits, can always be had as soon as introduced, at the usual catalogue price, but of a less size when of late introduction.

The following varieties of fruit have been worked extensively, and can be supplied in quantities for orchard planting or to the trade. Pears are generally two to three years old, and the apples three years, and of a good fair size.

Price of Pears per hundred $35, and of apples $20.

PEARS—Bartlett, Beurre Diel, Duchess d'Angouleme, Louise Bonne de Jersey, White Doyenne, Easter Beurre, Van Mons' Leon Le Clerc, Belle Lucrative, Dearborn's seedling, Heathcot, Madeleine, Columbian Virgalieus, &c. Also, about 50 varieties worked on Quince stocks, of a fine thrifty growth, suitable for dwarf trees.

APPLES—Baldwin, Esopus Spitzenberg, Rhode Island Greening, Fall Pippin, Roxbury Russett, Swaar, Yellow Harvest, Gravenstein, Yellow Bellflower, &c.

The following Ornamental Trees can also be furnished by the Hundred, at very moderate prices, of suitable sizes for ornamental grounds, cemeteries, &c.

Weeping Willows, Deciduous Cypress, Norway Maple, English plain Silver Maple, Mountain Ash, European Larch, Sugar Maple, Catalpa, Ailanthus, Linden, European Ash, Norway Spruce, Balm of Gilead, Fir, Arbor Vitæ, &c.

MAGNOLIAS, viz.—M. macrophylla, triptela, glauca, acuminata, ariculata, conspicua, soulangeana, purpurea, &c. Most of these can be furnished by the dozen or hundred.

The following Shrubs, Vines, &c., can also be furnished by the dozen or hundred:

Honeysuckles of sorts, Chinese and American Glycines, Bignonia grandiflora, and radicans, Clematises, Ivys, Snowballs, Lilace, Syringa, Laburnum, Pyrus japonica, Venetian Sumac, Spirea, Deutzias, &c.

Hawthorn, Honey Locust, Privet, Buckthorn, Osage Orange, Arbor Vitæ, &c., for hedging.

Orders by mail, directed to WM. REID, Murray Hill Nursery, New York, or left at the Nursery, where all orders are executed, will be punctually attended to, and put in shipping order to send any distance.

Catalogues will be sent to all applicants.

Murray Hill, March 1, 1849.—1t.

A Virginia Farm

FOR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat, corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear cherry and peach trees--many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern and physician quite near. Also, a market for all kinds of fowls, meats and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given, by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York

March 1, 1849.—3t.

Wm. R. Prince & Co.,

SOLE PROPRIETORS OF THE

LINNÆAN BOTANIC GARDENS AND NUSERIES,

At Flushing,

ANNOUNCE to their correspondents, and to nurserymen in particular, that, in addition to their vast stock of trees, occupying 70 acres, they have just imported 200,000 trees from Europe. They desire to forthwith receive the wholesale orders of nurseries and others, to which immediate replies will be made, stating the lowest rates, so that all engagements may be perfected now, and forwarded as soon as the spring commences. A credit will be given, or an extra discount made for cash, in whole or in part.

The following, we have a very large stock of:

Pears, on the pear and quince stock, of all sizes, 1 to 5 years from the graft, of which 12,000 are in a bearing state.

Apples, Cherries, Plums, Peaches, Apricots, Nectarines and Quinces, of all the choicest varieties.

Grapes—all the foreign table varieties, and all the good American varieties, including many thousands of Black Hamburgh, Golden Chasselas, White Sweetwater, Bar sur Aube, Isabella, Catawba and Clinton.

Raspberries—Fastolff, Red and White Antwerp, Franconia, Large Fruited, Monthly, &c.

Gooseberries—all the choicest Lancashire varieties.

Currants—Red and White Provence, Dutch, Victoria, Cherry, &c.

Strawberries—a collection surpassing all others, in Europe or America.

Rhubarb—Leviathan, Victoria, Tobolsk, Dalley's Giant, and other fine varieties.

Paradise Apple Stocks and Pear Stocks, two years old.

300,000 Ornamental Trees, and Shrubbery of all kinds and sizes.

100,000 Norway Spruce, Balsam Fir, Silver Pine, White Spruce, American and Chinese Arbor Vitæ, and other evergreens of all sizes.

3,000 Rhododendrons, 2 to 4 feet, of the finest varieties.

60,000 Roses, of all the finest Perpetual, Daily, Tea, Moss, and other classes, at very low rates.

Hedges—Osage Orange, Buckthorn, Hawthorn, Evergreen, Privet and others.

Bulbous Flower Roots—the finest of every class.

Dahlias—200 very select and superb varieties.

Camellias—400 varieties of blooming size, at low rates.

Chinese Azaleas—70 splendid varieties, very cheap.

Pæonies, Carnations, Chrysanthemums, Phloxes, Iris, and other beautiful herbaceous plants, very cheap.

Scions for Grafting, and Cuttings of Ornamental Trees and Shrubs.

The *only* extensive collection of bearing specimen trees, in this town, belongs to this establishment, and insures the superior accuracy of the trees grafted therefrom. Every rose and strawberry premium were awarded by the L. I. Horticultural Society, to this establishment the past season. Flushing, March 1, 1849.—1t.

(*Extract from the Genesee Farmer.*)

Profits of Fruit—Northern Spy Apple.

BY RICHARD J. HAND

Mr. Barry—Below I give you a statement of the products of one acre of land, on which I have grown the Northern Spy and Roxbury Russet Apples, during the year 1848.

110	barrels Northern Spy sold at	$2.50,	$275 00
10	do do	3 50,	35 00
30	do 2d quality, at	1.00,	30 00
100	do Roxbury Russet, do	1.00,	100 00
			$440 00

I sold the Spys mostly, to J. H. Watts, at Rochester. If any of the Monroe county farmers have a better story to tell, let's have it. They were grown on twenty-three trees.

Mendon, N. Y., December, 1848.

50,000 APPLE TREES, of the celebrated Northern Spy, (being the finest late spring apple grown in North America,) for sale at the Old Rochester Nursery, at Rochester, New-York, by S. Moulson.

1,400 trees, 7 feet high, at 50 cents each.
6.500 do 5 to 6 feet high, at 37½ cents each
10,000 do 3 to 4 feet high, at 31 cents each
33,000 do 2 feet high, at 25 cents each.

The above are all root-grafted. The small trees are fine for shipment to Europe. Orders for the 2-ft. or 3 to 4-ft. trees will be delivered in N. Y. or Boston *free* of charge for transportation when ordered in quantities of $25 or over. Sterling exchange received for foreign orders, at $4.90 to the £. European orders properly packed for the voyage, for which a moderate additional charge will be made.

The Scions from which the above trees were grown, were obtained chiefly from Mr. Hand's trees, and are guarantied to be genuine.

Also, a general assortment of

Apple, Pear, Peach, Cherry, Plum, Apricot, Nectarine, and other fruits; together with the usual assortment of Ornamental Trees and Shrubs And one thousand plants of

GIANT RHUBARB.

A variety that outsells any other offered in this market, and has invariably taken the first premium of the Horticultural Society of the Valley of the Genesee.

S. MOULSON,
March 1, 1849.—1t. 36 Front St., Rochester, N. Y.

To Farmers.

THE LODI MANUFACTURING CO., have now on hand and ready for sale, a large quantity of their *NEW AND IMPROVED POUDRETTE* freshly manufactured.

They *guarantee* that every barrel or bushel they sell contains 66 *per cent of night soil*, and point to a reputation of ten years standing, as well as to the heavy outlay of capital in their business, as in some sort a surety against imposition.

Considering *night soil* as the *strongest ingredient* in their Poudrette, their mode of manufacturing is simply to disinfect and add sufficient vegetable fibre to absorb moisture.

Two barrels ($3 worth) will manure an acre of corn in the hill, planting four feet apart each way. One application is sufficient on good ordinary ground. On *poor* ground a second application is sometimes necessary to ensure a good crop. This manure has advantages in its use over guano or other manures, being the cheapest and quickest in operation. Corn manured with it will grow more vigorously, and mature earlier—while the yield is heavier in proportion.

Four bushels struck measure, are packed in a barrel. It will be sold at the following prices, *delivered in New-York* free of cartage or other expense: 1 bbl. $2—3bbls $5, 9 bbls. $10.50, and at the rate of $1.50 per bbl. for any larger quantity. At the Factory, 25 cents per bushel will be charged. A trial is respectfully asked.

All orders containing a remittance, with directions to ship, will be immediately attended to.

Apply, if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York.

March 1.—2t.

Ayrshire Cattle For Sale.

THE subscriber having disposed of his farm, will sell at public auction at Three Hills Farm, on the Cherry Valley Road, 3½ miles west of Albany, on the 14th of March next, his choice herd of Ayrshire Cattle, consisting of the imported cow "Allice," her daughter, "Fairy," for which the first premium was awarded at the fair of the New-York State Agricultural Society, held at Saratoga Springs, in 1847. "Lassie," three years, "Moggie," two years, "Norma," one year, and "Jenny Dean," 9 months old. Two year old bull and bull calf. Also, several head of cows and heifers, a cross of Ayrshire and Durhams.

These cattle, except "Allice" and "Fairy," were bred by the subscriber, are principally young, and rich milkers. Also, 2 young boars, and several breeding sows of the Medley breed.

Catalogues, with pedigrees, &c., will be furnished at the sale.

C. N. BEMENT.

Albany, Feb. 1, 1849.—2t.

Selling Off.

LINNÆAN BOTANIC GARDEN AND NURSERY, late of Wm. Prince, deceased. *Flushing, L. I., near New-York.* Winter & Co., Proprietors.

In consequence of the decease of the Junior and of the advanced age of the surviving partner, the entire stock of this establishment, comprising every description, including the newest and choicest varieties, of

FRUIT AND ORNAMENTAL TREES,

Shrubs, Vines, Plants, Roses, &c., will be disposed of at *very reduced prices*, in order to close the business as speedily as possible.

Orders accompanied with the *cash*, to the amount of TEN DOLLARS, or upwards, will be supplied at a reduction of 25 *per cent* from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by *wholesale*, will be supplied at such reduced prices, according to kind and quantity, as will probably prove satisfactory to them.

DESCRIPTIVE CATALOGUES *gratis*, on application, *post* paid. Feb. 1.—2t.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolff, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

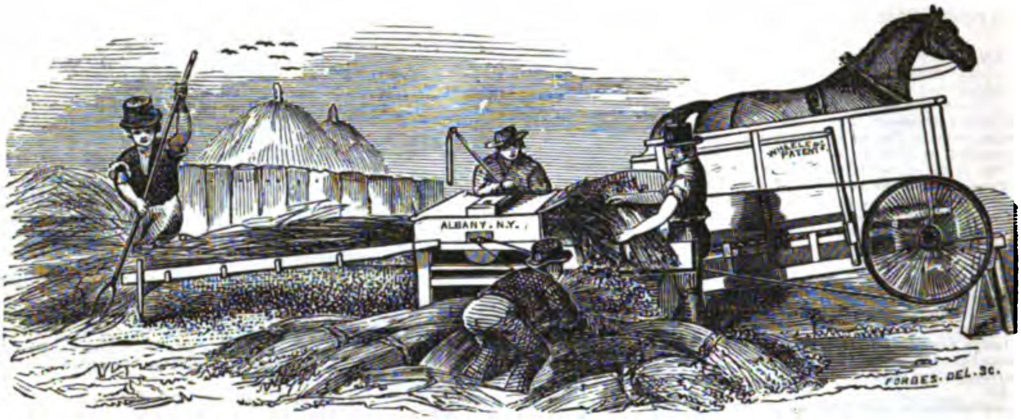
Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

WHEELER'S PATENT IMPROVED PORTABLE


WHEELER'S PATENT
ALBANY, N.Y.
FORBES. DEL. SC.

Railroad Horse Powers and Overshot Threshers and Separators.

HAVING sold about two hundred and fifty sets of these Powers and Threshers during the past eighteen months, many of which were purchased by some of the large Wheat Growers in this State, Vermont, Michigan, Illinois, Wisconsin and Canada, and without exception having given entire satisfaction, (which was guarantied in all cases,) I do not hesitate to recommend them to Farmers and Mechanics desiring such machines, as being in my opinion the most convenient, if not superior in all respects, to any others now in use. Very many flattering testimonials have been received, several of them estimating the cost of threshing at less than one half that with the ordinary sweep Powers, with from four to six horses. These machines have been extensively used in the eastern part of the state of New York, and generally through New Jersey and eastern Pennsylvania, nearly six years, and with a constantly increasing demand. The first machines put in use, and which have been in constant use, are nearly good as new; the only expense attending their use is the oil for the wearing parts, thereby establishing the fact that they are not only cheap, and within the reach and control of every ordinary farmer, but durable and cheaply kept in order. Some of the principal advantages of these machines are the following:

The power itself occupies but very little space, and is operated wholly, if desired, by the weight of the horse, the Power being placed at an angle of ten or fifteen degrees only, according to the weight of the horse, which is found sufficient for threshing all grains sawing wood, &c. It is comparatively light and portable, and can readily be handled by two men, and used on any common threshing floor, thereby securing ease and safety both to man and beast during stormy weather. The moving parts are very simple, as sufficient speed for all purposes is obtained with but one shaft, without gearing; thus avoiding a great amount of friction, which is unavoidable in most other machines in use. The Thresher is new in many respects, and has several important advantages over most others. By having an overshot cylinder, it admits of a level feeding table, and the person feeding it stands erect, also has the control of the horse, and by means of a brake, the power can easily be checked or stopped by him with perfect safety, thereby often avoiding accidents. By this overshot motion, all hard substances are prevented from getting in, avoiding the danger of spikes being broken and thrown out—not an instance being known of such accident. By this machine, the grain is not scattered, but thrown upon the floor within three feet of it, and admits a Separator to be attached sufficiently high from the floor for all the grain to fall through it, while the straw is carried quite over in good condition for binding, the straw not being cut or grain broken. The cylinder is considerably less in diameter than most machines in use, and has only about one-third as many spikes, but double the number in the concave, which admits of greater speed with the same power. It is also, several inches longer, which gives ample room for feeding it to much better advantage. The Separator has been sold with each Thresher, and is considered indispensible, as it makes a perfect separation of the straw and grain, leaving the latter in the best possible condition for the fanning mill. Three men with a single power, can thresh 75 to 100 bushels of wheat or rye, or four men with a double Power, 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat, per day; and with fanning mill attached to the Power, and one man to attend it, the grain can be cleaned for market at the same time.

They can be taken apart and packed very compactly, and forwarded to any distance by canal, rail road or wagon. The Single Power, with Thresher, Separator, &c., weighs nearly 1100 pounds; the Douple Power, with the other apparatus complete weighs nearly 1700 pounds.

Price of the	Single Power,	$80
do	do Thresher,	25
do	Separator and Fixtures,	10
do	Bands for Driving, etc.,	5
do	Whole, in complete order for use,	$120

To these may be added a Fan Mill, with crank and pulleys, price $30, and a Saw Mill, complete in running order, price $35.

The price of the Double Power, Thresher, Separator, &c., complete, is $145, including rights of using, or $25 more than Single Power.

The above are sold singly or together as desired.

All Machines and Powers are warranted to perform according to the foregoing statements, and in case the purchaser is not satisfied, himself being the judge, they may be returned within three months at my expense, and the purchase money refunded.

TERMS.—Cash on delivery of the Machines. All orders should be addressed Albany, and will be promptly attended to, and Machines delivered in care of railroad, canal or steam boat in Albany, Rochester, or Buffalo, the lowest rates for transportation from Albany only being added to the published prices. Remittances by mail at my risk. That the public may rely upon the foregoing statements, they are referred to the following certificate.

"The subscriber hereby gives notice that he has disposed of his interest in the Albany Agricultural Warehouse to Mr. Horace L. Emery, who will hereafter continue the business in his own name, (at his new stand No. 369 Broadway, Albany.) All demands against the establishment will be paid by him; and all persons indebted to it, to settle their accounts with him without delay. Mr. Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance thus formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass., (the largest in America,) I feel an entire confidence in commending him to the public, as one in whose integrity and judgment, the patrons of the establishment may safely rely."

LUTHER TUCKER,

Editor, Publisher and Proprietor of The Albany Cultivator, and Proprietor and Publisher of the Horticulturist.

Feb. 1, 1848.

Also to the following persons, viz:

RUGGLES, NOURSE & MASON, Worcester and Boston.
S. W. Cole, of the New England Farmer, Boston.
WM BUCKMINSTER & SON, of the Mass. Plowman, Boston.
PARKER & WHITE, Boston.
T. C PETERS & BROTHER, Buffalo.
RAPAIJE & BRIGGS, Rochester.
D. D T. MOORE, Ed. and Pub. Gen. Farmer, Rochester, N. Y.
J. M. EARLE, of the Mass Spy, Worcester.
J. A. WIGHT, Editor of the Prairie Farmer, Chicago.
A. B. ALLEN, Ed. of the American Agriculturist, N. Y

We shall have an efficient agent at ROCHESTER, BUFFALO, CHICAGO and MILWAUKIE, and as far as possible keep a constant supply on hand at each point, for the purpose of facilitating the safe and speedy delivery and shipment of machines, and fulfilment of orders from a great distance, thereby avoiding the often long and perplexing delays occasioned by the irregularities of canal and lake navigation and inattention of disinterested forwarding and commission agents; and last, although not least, to avoid unreasonable charges. Shipping receipts and bills of lading always filled out and signed, and forwarded to the purchaser and consignees on the delivery of all machines

Persons wishing either of the above machines can obtain further information by addressing me by mail—all communications promptly attended to, and orders solicited.

Albany Agricultural Warehouse & Seed Store,
No. 369 Broadway, Albany, N. Y.
HORACE L. EMERY.

☞ Price and descriptive catalogues, Gratis.

Red Antwerp Raspberries.

5,000 Plants of the true Large Red Antwerp Raspberry, for sale by the subscriber, at $6 per hundred or $50 per thousand. The Plants are large and strong, and warranted true

S. A. BARRETT.

Milton, Ulster Co., March 1, 1849.—1t.*

A Good Book Coming!

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Vetinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

First—It is a mature work and a practical one, one which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and ultra scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

Secondly—It will have an unprecedented sale on account of its cheapness. It will make a volume of 288 closely printed pages. Illustrated with over one hundred beautifully executed engravings, by Brown, and will be sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It will contain full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work will be published early in February.

ONE HUNDRED AGENTS,

Active, intelligent and honest, are wanted to sell this book, in every State in the Union. A cash capital of from $25 to $50 will be necessary. Address, (*post paid*)

JOHN P. JEWETT & CO., 23 *Cornhill*, *BOSTON*.

☞ A rare chance for Agents to make money. Feb. 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of **George Bommer**, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

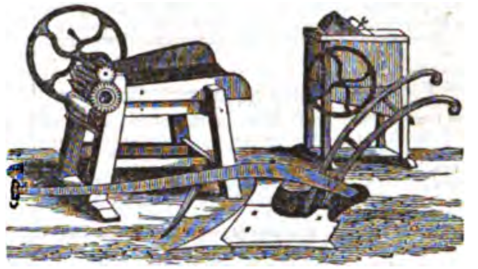
Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample. T. C. PETERS & BRO.

Buffalo, Dec. 1—6t.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co.'s celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown to be of a dangerous tendency. These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one.

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot
Healing balsam for wounds and saddle-galls, 75c. per bottle
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S Horse and Cattle Medicine Depot, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. Feb. 1.—3t.

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

New Series. ALBANY, APRIL, 1849. Vol. VI.—No. 4.

Limestone Soil of Kentucky.

Remarks on the Agricultural Value of the Blue Limestone of Kentucky; with its analysis: By Robert Peter, M. D., Prof. of Chem. in the Medical Department of Transylvania University, Lexington, Ky.

The region in which Lexington is situated, has long been justly celebrated for the great and lasting fertility of its soil; which, by the production of its luxurious vegetation, plentiful crops of corn, and herds of fat animals, evinces that it is rich in the elements which are essential to vegetable, as well as to animal growth.

Unlike the soil of many other parts of the world, heavy production does not quickly exhaust it. A field which has been cultivated in corn for twelve or twenty years, may be made almost as fertile as it was at the commencement, by resting it with a clover crop, or depasturing it for a time in grasses. It is, consequently, not the custom of the country to pay much attention to manures; and some of our farmers even consider the accumulations about their stables as a nuisance.

Her fertile soil enables Kentucky to export, from her rich counties, an immense number of hogs, cattle, mules and horses, a large quantity of hemp, and a considerable amount of Indian corn. The corn crop in Kentucky for 1847, was estimated at 62 millions of bushels, and during the past year, (1848,) at least 250,000 hogs have been sent abroad, to be slaughtered and consumed.

It cannot be supposed, however, that the soil will continue to maintain its fertility, under the immense drain made upon it by the exportation of its products; and old inhabitants have been for some time complaining that the long cultivated soil has undergone visible deterioration.

Since chemistry has given her assistance to agriculture, the reason of this has been made very clear. Every product of the soil takes from it, in notable quantity, certain mineral substances which are essential to its growth and formation. These are known to be, alkaline salts, sulphur and its acids, phosphoric acid, lime, oxide of iron, silica, &c. These substances are as essential to animal existence as they are to vegetables; and both animals and vegetables can no more subsist or thrive with a deficiency of these mineral ingredients than they can without water.

The saline and earthy matters, which form the ashes of plants and their products, are the same which are essential to the bones and other solids and the fluids of the animal body. Where they are abundant in a soil, other things being propitious, the vegetation becomes rich and matures a plentiful harvest, and animals grow and fatten easily on the products; for the plant draws them from the soil and works them up into forms adapted to animal nutrition. On the contrary, where they are deficient in the soil, vegetation is scanty, and the animal races dwindle and starve.

The fertility of the soil depends more on these mineral ingredients than on any other, although they really form the smallest relative proportion of the weight of vegetables and animals;—for the other ingredients of the organized bodies, viz: carbon, hydrogen, nitrogen and oxygen, are derived from the atmosphere and from water, which are universally diffused; while these mineral ingredients are the properties alone of the soil and when present in sufficient quantity, even in pure earthy matter of any kind. they stimulate the growth of vegetables, which by their final decomposition, soon fill the earth with humus, and form the rich vegetable mould.

Amongst the most important of these is phosphoric acid, which, in union with lime, magnesia, and perhaps oxide of iron, enters into the structure of all vegetables, and the more nutritious the vegetable substance, the larger is its proportion of the acid. The grains are peculiarly rich in it:—Boussingault remarks that no seed is known which does not contain it. Hence, a plant, growing on a soil which does not afford it, never matures its seed, and the production of seeds of any kind speedily exhausts a soil.

Phosphoric acid is equally essential to animal growth, it being a constituent part of all the organs of their body, and particularly of their bones, the earthy matter of which being mainly phosphate of lime.

An idea of the quantity of phosphoric acid which is annually taken from the soil, may be obtained by studying the chemical analyses of the ashes of vegetable substances.

Indian corn gave me more than 1 per cent. of ashes of which 50 per cent. is phosphoric acid. Wheat gives nearly 2½ per ct. of ashes of which more than 60 per ct. is phosphoric acid. Oats and rye contain it in but a little smaller proportion, and every 1,000 pounds of dried hay contains about 3½ pounds of this acid. In short, the ashes of wood and all vegetable substances, are rich in phosphates, and hence the utility of even leached ashes as a fertilizer.*

In every bushel of Indian corn sent out of the state, we export about one-third of a pound of phosphoric acid; and in the bones and body of every hog, there is at least two pounds of this substance; so that in her 250,000 hogs, exported during the year just terminated, Kentucky has sent off at least 500,000 pounds of this valuable ingredient of her soil. Taking into consideration the whole of her exports, in animal and vegetable products, the amount of phosphoric acid sent every year from the fertile counties alone, must be much above a million of pounds.

As this indispensable ingredient exists but in a small relative proportion in the best soils, continued exportation of products, without a corresponding importation of the mineral elements of animal and vegetable substances, must impoverish the country.

---

* I refer the reader to *Boussingault's Rural Economy*, (translated by Geo Law, and published in 1845, by Appleton. N. York) for many interesting facts in this relation; and many reports of the analyses of ashes of vegetables are given by Dr. W. Knop, in the Vol. XXXVII of the *Journal fur Praktische Chemie*—p. 34.

In some parts, Guano, which is rich in these matters, can be and is used, to supply phosphates. In England it is found advantageous to import bones, from a distance, and to grind them to powder, to spread them on the soil. Which application increased the product, in some places, in two and even three fold proportion.

In a country which consumes its own products where they are raised, and in which the animal excretions are not allowed to be washed away in the streams and rivers, the soil is kept fertile by the constant restoration to it of these mineral ingredients, in the bones and excretions of animals which are applied to it. And political economists see in this fact, apart from other considerations, an immense advantage in a *home consumption*, by home manufacturers;—in "placing the anvil by the side of the plow." But when, as is the case in Kentucky at present, there is a constant exportation of vegetable and animal products, which are rich in the most valuable and indispensible ingredients of the soil, the fatness of the earth is steadily and certainly transferred from the exporting to the importing country; and the land of the former will become poorer and poorer, unless these valuable ingredients are, from some source, resupplied to it.

Reflections of this kind caused me to turn my attention to the rock stratum which underlies this fertile region, with a hope of finding in it some compensation for this annual loss of the phosphates and the other essential elements of the soil. This rock is of the "Blue Limestone formation," a lower member of the *Silurian formation* of the English geologists. It is the equivalent of the "Trenton Limestone" of the New-York geologists; and like that, is full of the fossil remains of marine animals:—the shells, crusts, coralloid structures, of the ancient denizens of the primeval ocean, under which it was evidently deposited;—giving promise, to the analyst, of the presence of all those ingredients which are essential to animal as well as to vegetable structures, and which have been already referred to as existing in all fertile soils.

Our limestone presents various characters in its different layers; some being hard, of a semi-crystalline structure, and of a bluish grey color; other specimens are more earthy in their composition, more shaley, of a darker color, falling readily to powder on exposure to the atmospheric agencies; all being in layers of greater or less thickness, the solid masses being separated generally, by shaley matter.

The hard gray rock is quite durable in its nature, and is extensively employed for turnpikes, for the foundation of houses, steps and walls; but all varieties change to a dirty buff color on the surface, in time, by the peroxidation of iron; and disintegrate more or less rapidly, on exposure to the air: in consequence, doubtless, of the presence of protoxide and sulphuret of iron in the rock, which break up its structure when they unite with the oxygen of the air; as well as by reason of the presence of its numerous shells, and other fossil remains, which occasion minute fissures, into which water and air penetrate, and with the aid of frost, cause the rock finally to crumble.

The hard layers burn into very good fat lime, which makes good mortar, but in consequence of the quantity of oxide of iron present in it, the color is not as pure as is desirable for nice whitewashing.

But few trials have been made of the fertilizing powers of this limestone by our farmers, although it is so abundant and so easily to be obtained; no doubt because new land is cheap in the United States, and labor dear; more especially, because no immediate want of fertilizers is felt by our agriculturists. But on the edges of our McAdamized roads, the corn rows which receive the powdered limestone in the form of dust, are observed to be more flourishing than the others; and in places where the soil is very thin, and filled with fragments of the limestone, the product is always very good, when the season is not too dry. Gardeners, who have employed it on their small crops, speak highly of its utility as a fertilizer.

It has been the custom in England and other countries, as well as in some part of the United States, to use lime very freely on the arable land. It is, indeed, considered almost essential to the production of wheat; and enormous quantities of it are spread in some localities. A difference of opinion exists as to *the manner* in which the lime acts to improve the soil; for example, it is supposed that it aids the solution of hard vegetable substances;—that it brings the silex of the soil to a soluble condition, and that it warms the earth and stimulates vegetation in some indefinable manner. But it is probable, that if correct analyses were made of those limestones which are known to be the best fertilizers, another reason for its utility would be found in the presence in it of the essential mineral elements of vegetables, viz: phosphates of lime and magnesia, sulphate of lime, oxide of iron, potash, soda, &c.

Chemical analyses of limestones and of soils, as they are ordinarily performed, are of but little practical value even to scientific agriculturists, because they do not include the estimation of the phosphates and the alkalies; which are the really essential ingredients, but which, in consequence of their existence in comparatively small proportions, and because considerable labor and some skill are required to estimate them accurately, are usually overlooked by the analyst.

It would be far better, for agricultural purposes, to estimate *only* the phosphates and the alkalies, in a soil, a marl, or a limestone, than to give only the silex, the alumina, the oxide of iron, lime, and vegetable matter; which really are of less importance in this relation.

During the past month or two, in my leisure moments, I have submitted to analysis, several specimens of the Kentucky Blue limestone, and have been much gratified to find my anticipations realised in relation to its agricultural value, as will be seen by reference to the results given below.

Specimen No. 1, is of the hard grey limestone; it was dug out of a well in the city of Lexington; it contains geodes lined with brown spar, pearl spar, calc spar and fluor spar and the usual fossils; its specific gravity is 2.45 in a dry specimen. On analysis, it was found to be composed of the following materials; viz

Carbonic acid,	36.675
Phosphoric acid,	1.350
Sulphuric acid,	807
Lime,	47.046
Magnesia,	900
Alumina and oxide of iron,	9 880
Fine sand and silicates,	1.790
Moisture and loss,	1.552
	100.000

Specimen No. 2, from the hard thin layers which are more superficial than the first in this locality, yielded:

Carbonic acid,	40.53
Phosphoric acid,	36
Sulphuric acid not estimated.	
Lime,	50.97
Magnesia,	66
Oxide of iron,	32
Alumina,	15
Sand and silicates,	6 52
Moisture and loss.	49
	100.00

In addition to these ingredients, potash and soda were obtained from the limestone, whenever the proper processes were employed; in one case as much as 0.0487 per cent. of potash; in another, 0.0058 per cent.

In two other specimens the proportion of sand, &c., was found to be as much as 13.5, and 20.3 per cent. As much variety, no doubt, exists in the composition, as in the appearance of the different layers of the limestone

Iron is present in the blue and grey rock partly in the form of protoxide; there is also some sulphuret of iron diffused throughout it, which by oxidation produces sulphate of lime or gypsum. Sulphur, it is well known, is an important element of plants, especially of the most nutritious kinds, as the cabbage; it is also found in the mustard, the turnip, and in almost all the animal tissues.

Our limestone therefore contains all the mineral ingredients necessary to organic nutrition; viz. phosphorus, sulphur, lime, magnesia, oxide of iron, silex and potash, and soda in small quantities.

Some specimens appear to contain a larger proportion of phosphoric acid than is stated above; one analysis gave me as much as 2.57 per cent. as estimated by the precipitated phosphate of iron. As the presence of this acid, in the rock, is a fact of great importance, and the processes for its correct estimation require great care, I have taken unusual pains to arrive at positive certainty in regard to it; and in consequence of my desire to separate it fully from all impurities, my estimation of its per centage is, no doubt, below the truth, from the unavoidable loss which this substance sustains in the various processes used. The chemist will understand this when I describe these processes.

1. The ground limestone was dissolved in hydrochloric acid, with a little nitric, and the solution filtered from the sand and silicates.

2. Pure ammonia, and chloride of ammonium, were added to the boiling solution, and the precipitate was, after careful washing, re-dissolved in a little hydrochloric acid. This contained oxide of iron, alumina and the phosphates.

3. Acetate of soda was boiled with the solution (2,) sometimes with the addition of some chloride of iron, which threw down all the phosphoric acid as phosphate of iron. There was generally enough oxide of iron in the limestone to combine with all the phosphoric acid.

4. The precipitated phosphate of iron was re-dissolved in hydrochloric acid, with tartaric acid and ammonia, and the phosphoric acid was thrown down from the solution by sulphate of magnesia.

5. This precipitated ammonio-phosphate of magnesia was re-dissolved in hydrochloric acid, and precipitated again by ammonia, and, after thorough washing, was ignited and weighed, and the phosphoric acid estimated.

Not content with this, the phosphate was dissolved in nitric acid, and the phosphoric acid carefully precipitated by nitrate of silver and ammonia: from the precipitated phosphate of silver the silver was removed as chloride, and by the evaporation of the liquid, the phosphoric acid was obtained in the glacial state, by gentle ignition in a platinum capsule.

The original precipitate (2) containing the phosphates, was also treated in another way. Dissolved in nitric acid, acetate of lead was added to its solution, until all the phosphoric acid was thrown down as phosphate of lead; which, after being well edulcorated, was re-dissolved in a little nitric acid, and the lead separated by means of sulphuretted hydrogen. The filtered liquid evaporated as above, yielded the glacial phosphoric acid; which, re-dissolved in water, was estimated as pyro-phosphate of magnesia.

In the glacial form, by this last process, the phosphoric acid weighed 3 per cent. after moderate ignition. But this acid is so hygrometric that it cannot be correctly estimated in the uncombined state.

In the estimation of the magnesia, the usual mode is to precipitate it from the filtrate[*] (2) by adding phosphate of soda; but as the ammonio-phosphate of magnesia is not wholly insoluble in a solution of chloride of ammonium, I used the process of Berzelius, viz. ignition with the oxide of mercury; or, what is still more convenient, a modification of the process of Boothe, as follows:—Sulphuric acid in sufficient amount was added to filtrate (2,)and the mixture was concentrated by evaporation. Alcohol, in equal volume was then added, and the precipitated sulphate of lime was washed with diluted alcohol. The sulphate of lime, ignited and weighed, gave the proportion of lime, while the filtrate gave on evaporation, the magnesia in the form of sulphate.

The proportion of carbonic acid was ascertained by the process of Fresenius.

I give this abstract of chemical processes that competent persons may be enabled to judge as to the value of the analyses.

It must be evident, from the foregoing facts, that the Blue Limestone of Kentucky, should it generally be found to resemble that above described, will be a valuable agricultural resource, when the soil begins to show the inevitable consequences of the constant exportation of its products; and that, with this immense source of fertilizing materials beneath our feet, we need never fear the thorough exhaustion of our soil.

One bushel of lime, such as specimen No. 1, containing about 1¾ lb. of phosphoric acid, will yield phosphates enough for 5 bushels of corn; while 2 or 3 bushels of lime would supply all that are carried away in the bones and body of a hog.

By actual experiment, within my own knowledge, of burning 2700 bushels of lime in one rude kiln;—the rock having been purchased at 50 cents per perch of 24¾ cubic feet;—the wood at $3 per cord, and the labor estimated at 75 cents per day,—it is found that lime can be obtained for 10¼ cents per bushel.

Our farmers, with their own wood, and farm hands, can burn it much cheaper, and I do not doubt that if they make the experiment on a sufficiently large scale, they will find their labor and expenditure well repaid; whether they use it in the cornfield, on their wheat, or clover, or on the orchard. All vegetables require the elements which are found in it, and it cannot come amiss any where, when applied in the proper manner.

It may be used in the proportion of from 20 to 50 bushels to the acre; spread in the fall, on the surface, in the dry slacked state.

It is especially recommended for the potato crop Potatoes, and particularly the stalks, are found to contain a very large proportion of phosphoric acid in their ashes, and it is probable that their liability to "the rot"*may have some relation to the deficiency of phosphates in the soil. *Jan.* 31, 1849.

Suggestions for Farmers.

System, Order, and Economy.

In the last number of *The Cultivator*, it was shown how the absence of Order in relation to the plow, worked a loss to the farmer of more than three dollars per acre; and allusion was made to the necessity for sound judgment in the selection of tools, implements, and machinery for our farm purposes. To make this discretion more apparent, the following list of plows with their relative position as to merit, is selected from the various volumes of Transactions of the State Agricultural Society—the list cannot fail to be useful to every farmer, exhibiting a wide range in the force required for working them, and so far, is a guide to the selection, provided the material of which they are respectively made, is equally strong and good. It will be noticed that the resistance offered to our horses in plowing, varies according to the construction of the plow.

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[*] Filtrate, i. e. the liquid filtered from the precipitate.

from 225 pounds up to 500 pounds,—a difference of labor seriously affecting Economy.

Agricultural Mechanism, is by no means confined to New-York; therefore, before we proceed to examine the list alluded to, we may with signal advantage, examine the handiwork of our neighbors. As their mode of computing resistance differs from the method used in this State, the plows could not be conveniently arranged in the table; they use the Dynamometer in the same way as used at our State fairs, but the ratio of resistance is thus stated: if the force of the team applied is equal to the raising of 336 pounds over a single pulley, and the depth of the furrow is 6½ inches with a width of 13 inches, then multiply 13 by 6½ and you have 84 and a fraction; then if 336 pounds of force will take up and turn over 84 inches of earth, 112 pounds will turn 28 inches. It was in this way, the eastern plows were tried by the Massachusetts Agricultural Society, for their premiums of *one hundred* dollars, and *seventy-five* dollars, for the best plows—one plow for *lapping* the furrows, the other for *laying them flat*.

Tried in this way, the power in each case being 112 pounds, the plows respectively turned over the quantity of earth as stated in figures, and thus exhibited their relative resistance—i. e.

Plows for *lapping* furrows:—

Charles Howard's	29½	inches
Ruggles, Nourse & Mason's,	24	"
John Wilson's,	21½	"

Plows for *flat* furrows:—

Prouty and Mears',	27½	inches.
This plow took the premium of $100.		
Charles Howard's,	25	"
Ruggles, Nourse & Mason's,	24	"

Other plows were tried, but all offered greater resistance than the foregoing. The above claim the careful attention of the prudent farmer.

Let us now examine the list of plows tested in this state.

Makers.	Wheremade	Name of Plow.	Resistance.	Depth of furrow.	Widthof furrow.
S. W. Chase,	Amsterdam,	Montgomery County	225	5 inch.	11 inch's
T. D. Burrall,	Geneva,	Shell Wheel,	241⅜	5.8	12.8
		Geneva,	325	6	13
E Sleight,	Fishkill,	Revenue Cutter,	250	5½	12
Miner, Horton & Co.,	Peekskill,	Peekskill,	255		
A. Hawley,	Brooklyn,	Bergen,	275	6	12
H. Delano,	Onondaga,	Diamond,	287½	6	13
M. H. Codding,	Ontario,	American,	330	5½	14
J. Waite,	Albion,	Veto,	335	6	12
S. W. Hall,		Williamsport,	337	6	12
P. Elyea,	Livingston,	Caledonia,	345	6	12
T. Mercer,	Peekskill,	Peekskill,	348	6	12
Miners,		Peekskill, No. 22,	350,		
Peter Proseus,		Columbia,	350	5	13
Oxford,	Chenango,	Oxford,	371	6	12
Brainerd & Comstock,		Diamond,	375		
Wilson,	Oneida,	Oneida,	381		
J. S. Tefts,	Erie,	Washington,	381	6	12
Hicks & Bailey,		Wyoming,	383	6	12
E. Davis,		Worcester County,	386	6	12
P. D. Wright,	Rochester,	Cayuga County,	388	6	12
F. Richardson,		Iron Beam,	388	6	12
C. Seymour,	Lockport,	Opposition,	397	6	12
H. Wiard,	Avon,	Livingston County,	400	6	12
E. Wilson,	Vernon,	Diamond,	400		
Ruggles, Nourse & Mason,	Mass.,	Eagle,	415	6	12
R. C. Stiles & Co.,	Ontario,	Ontario,	431	6	12
Moore,		Self Sharpener,	437½	6	14
J. Van Bronklen,	Niagara,	Middleport,	438	6	12
Gaylord,		Auburn,	475		
Asa Beebee,		Black Hawk,	475		
Bailey, Whitler & Co.,		Utica,	475		
J. C. Fitch,		Livingston County,	483	6	12
Wm. Frater,	Otsego,	Scotch Plow,	500		

It will be noticed that the Shell Wheel plow, and the Geneva plow, by the same maker, (Burrall of Geneva) are placed side by side, purposely, to draw attention to the effect of a well formed and well applied wheel; for these plows are in all respects the same, save only, the use of the shell wheel in the place of the land side; this wheel produces the difference stated in the table, in the draft of the two plows of more than eighty-four pounds in favor of the wheel; a difference which, if given by the wheel to other plows named in the list, would present for our selection, a rare and most choice assortment. Thus, if the excellent "Center Draft" of Prouty and Mears, which I believe offers a present resistance of 292 pounds could be reduced by the wheel to 208 or 210 pounds, it would exceed every other known plow. The same as to Delano's Diamond, and and so also, as to Ruggles, Nourse and Mason's admirable Eagle, if it could be reduced by the wheel, to 331, we need look no further for all that is needful in the form of plows. That word *if* arrests our progress for the present; nevertheless, with the list before us, no farmer can be excused for *imperfect* plowing, let his soil be what it may. Any reasonable depth or breadth of furrow may be had,—the furrow slice may be laid perfectly flat and true, or it may be lapped with precision—our horses need no longer show galls and scars, nor upbraid us with cruelty; on the contrary, when they have toiled through the heat of the summer, and return home from the last furrow of the season, they will exhibit their fat and shining sides, gamboling in the last rays of the setting sun, as if to express happiness in a duty well performed, and gratitude to a liberal, careful master.

It is no small matter that plow makers present their work to us in a highly finished condition, and in this respect, we have reason to applaud Prouty, Mears & Co., and Ruggles, Nourse & Mason—the polish of their mould boards and other metalic parts prevent a large amount of resistance, as I well know by the use of "a Center Draft;" in this matter, our eastern friends have shown *heretofore* more *order* and *economy* with neatness, than was to be found among us of New-York. *Now* however, I for one, am using plows equal in all *these* details, to those of Massachusetts.

A farmer always does *love* his horses, if his own heart is hung in the right place; and a man thus constituted will be loved by his horses; had they the power of speech, they would entreat us to seek for, and use, such plows as offer the least resistance to their willing shoulders, consistent with an expeditious and good performance of their work;—let us then give more attention, more consideration, to the due selection of these most important implements.

In making our selection, however, we must remember that the tool must be adapted first to the nature of our soil—so as most easily to raise it and move it—and next, that it be so constructed as perfectly to turn it over. In a stiff clay we find the long Scotch plow presenting a severe resistance, while our shorter breasted plows move throu'h it with comparative ease: the reason is, that more surface is presented to resistance in the long plow. In light soils, this is not so important a consideration.

My own experience has led me to the use of Burrall's Shell wheel and the Geneva plow, Prouty & Mear's Center Draft, the Eagle and Chase's Amsterdam. I have others in use, but prefer the foregoing.

For many ages, the Harrow has been our familiar friend, without change in form or feature from the earliest time, until within the last twenty years,—and its uses have ever been to follow the plow, breaking the upturned masses into a pulverised condition; to draw out weeds by their roots, exposing them to the air and death; and to cover over seeds when sown on the prepared earth. It is somewhat remarkable that the importance of these operations should not have earlier produced improvements, leading to economy; nor is it less strange that on *many*, I had nearly said most farms, this operation is performed with an imperfect tool, or, in a most imperfect manner. The want of *Order* induces the first error; the want of System causes the latter—and from this also, we see too often, the custom of entrusting the harrow to boys, whereas harrowing is in fact, when *properly* done, a laborious business, for to be well done, we need fast horses, a *quick* movement and careful over lapping of the lines.

What is the inevitable consequence of slow and unsteady harrowing? or of work performed with an imperfect implement? The ready answer is, a rough and uneven field, unequal distribution of seed and its destruction by exposure; of course, a diminished product per acre, pressing its penalty upon the farmer, who "don't care"—or thinks "its good enough,"—or "as good as his neighbors." Such men are without order or system; as to economy, they know not its meaning.

The chief improvement in the harrow, has been in its form, not effecting any very decided general advantage; but its defects have led to the introduction of another implement, the *cultivator*, which in a great degree, supercedes the harrow, and renders the second plowing of fields often useless or unnecessary.

The cultivator, when first introduced, was confined to the corn field and potato crop—but lately it has been so constructed and improved by Mr. Ide and others, as to follow the plow very successfully in the preparation of the ground—but more especially to perform all the necessary operations of a fallow after the first plowing.

This implement or cultivator, as made by Mr. Tracy, of Wayne county, and by him introduced into Ontario and Seneca counties, seems to be an admirable substitute for the purpose of cross-plowing, and all the usual work of the harrow; being so constructed as to cut six inches deep, or, only to skim the earth, as may be desired. Here then we have a labor-saving machine, for, as it is 4 ft. 6 wide, with four teeth in the rear, and three in the front row,—it acts at the same time, on a breadth of soil equal to at least four "bouts" of the plow—stirring the earth 6 inches deep. Substituting the cultivator for the plow, after the first plowing, the gain, by its use instead of the plow is, at least sixty-two and a-half cents per acre, or, the difference in cost between plowing and harrowing—an item of importance in every field of grain; the thinking farmer will readily find other advantages.

I cannot discover any trials of the cultivator, to show us the quantity of force required for its proper use, an omission on the part of our agricultural implement makers, of more importance than they imagine; let us hope that, hereafter more anxiety will be felt to prove the saving of labor or force, not by assertion but by *measure*, and thus save us farmers from much loss of time, and disappointment.

It was intended to follow the remarks on the plow, with a consideration of the *harrow*, *cultivator* and *seed sower;* the season however, for planting corn is so near at hand, and the corn crop is so important, that I venture a repulse from your well stored columns, to show if I may, the economy with which this most valuable grain can be raised, and is produced in this part of our State.

Long Island and the valley of the Mohawk, has heretofore produced a larger amount of corn per acre, but that advantage is equalised to us of the inland counties, by the greater economy of labor and possibly of system.

A machine is in use here, produced by the ingenuity of Mr. H. L. Emery, of Albany,* simple, and worked by a single horse; we call it the *Corn planter*, though it is arranged for the planting of any and every kind of seed in rows or drills. When this corn planter is solidly and strongly put together—and the ground is in proper condition for planting, we plant not less than ten acres per day,—one man and one horse only being necessary for the work. The rows of corn are placed three feet or three feet six inches apart, and the seed is dropped about six to eight inches asunder in the rows.

The after cultivation, or hoeing, is effected by the horse hoe. The following results have been derived from the use of these machines:

Plowing, harrowing, hoeing and preparing 21 acres for Corn, at $2.27 per acre, ...	$47 67
Planting 21 acres with Emery's Planter, in two days, man and horse, ...	4
Cost of 26 quarts of seed corn, at 75 cents per bushel, ...	6 50
Husking and housing in crib, at $3.17 per acre,..........	66 67
	$124 84

The yield of this field was moderate, being only 1600 bushels of ears, which at the above cost, is equal to seven cents and eight mills per bushel.

The yield of fodder was very large, but if we estimate it as low as 1½ tons per acre, then the cutting and housing of the whole fodder, say 30 tons, was $19.06—which added to the cost of cultivation, makes an aggregate of, ... $143 90

Deduct for the value of the fodder, at $2 per ton, ... 60 00

$83 90

Thus the actual cost of the 1600 bushels of ears is $83.90, or *five cents* 24-1000 *per bushel*—or for the grain alone it is *ten cents* 48-1000 *per bushel*. Such is the result derived from the *Corn Planter*, and *Cultivator*, and *Horse Hoe*, from a moderate yield of corn. Much better results have been derived by others, from the same system and order; and I think none will deny that economy is thus well studied and practiced. Agricola. *Seneca Co., N. York.*

Influence of Agricultural Periodicals.

That a great improvement has taken place among the agricultural population of the United States within the past ten or fifteen years, but more particularly in the eastern and middle sections, is a fact which I believe will not be denied. To what is this improvement chiefly to be attributed? I answer, and I think correctly, to the influence of agricultural periodicals and papers. Agriculture, although one of the noblest of callings, has been in times past grossly neglected. Like many occupations by which a subsistence may be obtained without much exercise of the mind, it began to be taken for granted that the exercise of the mind was not required, and was a matter of but little importance. Men farmed as their grandfathers had farmed, half a century before them. Agriculture, instead of improving, stood nearly still, or retrograded somewhat. Lands became worn out by bad tillage; and most of those who could escape from the plow, left their homes to seek out employment by which more money could be made with less hard physical labor. Here and there a man was to be met with who had become rich through trade or commerce, and had retired to a farm; but it was not the profit, but the pleasure of farming he had gone to enjoy. Matters were somewhat in this condition about the time of the establishing of the first agricultural papers. From that period to the present time, there has been a steady progression in agriculture.

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* For cut and description of this implement, see last vol Cultivator, p. 329.

Let us glance at some of the benefits arising from these papers. I know not how other minds may view it, but for myself I may safely say, that as a practical farmer, the opportunity afforded for the interchange of thought, through agricultural papers, is one of the greatest enjoyments I have. I welcome the monthly receipt of my paper with no common interest, for from it I always expect to derive some improvement. The suggestions, coming as most of them do, from practical men, are all worthy of consideration, and although they may not all be adapted to the particular situation in which we may reside, yet they will doubtless be found of value somewhere through our widely extended country. There is an amount of useful general information to be gained from the perusal of these papers scarcely any where to be met with in the same space. We not only gain knowledge on agricultural subjects, but we become acquainted with the geography, geology, climate and productions of our vast country from Maine to Florida. We learn among other things, the important truth that even in the cold and mountainous regions of our land, by the aid of science and improved tillage, farms are made to produce crops which will compare favorably with those raised upon the smoothest plains.

The farmer is a man whose business is *at home;* he can wander but little, but it does not follow that he must be ignorant. Sitting by his cheerful fireside of a winter evening, he takes his paper in hand and begins *his travels*. At one time he is among the best farms of New England, then in western New-York—then with the rapidity of the magnetic telegraph, he visits the western and southern states. For the trifling expense of a dollar or two a year, he becomes familiar with almost every portion of the Union.

There is a sociability too, so to speak, about agricultural papers, which is truly delightful. You become acquainted not only with their editors, but with a hundred others. Situated in some remote district, where perhaps most of those around you have not yet awakened to the importance of *book farming*, and are looking with doubts and misgivings upon your mode of farming, it is indeed, truly delightful to be holding mental intercourse with many of the best farmers of the land. There is many a man among that goodly fellowship of farmers, who should I chance to meet with, strangers to me though they might be, yet would I clasp them by the hand as friends. And are they not friends? Yes—friends in the cause of agriculture. They have labored to elevate that calling, great and noble in itself, but too long neglected and trampled in the dust.

Much has been done for agriculture, but much remains to be done. Some of the recent statements before the agricultural societies, show an improvement in culture and tillage that was not even dreamed of a few short years ago. The men of New England and the middle states need these statements to encourage them onward. What are we to do by and by? is a question sometimes asked by farmers of these parts. How are we to compete with the great west? Railroads and canals are multiplying—facilities are becoming greater every day for bringing produce from those markets to our seaports. They can raise every thing cheaper than we can. What are we to do? Not sit down and mourn over our fate—not sell our farms and move there too—but stay where we are, and work head-work. Raise 100 bushels of shelled corn where we formerly raised 20; raise 2 tons of hay where we used to grow one; keep 10 cows, and good ones too, and keep them well, where we formerly did 5.

We may not be able to do so this year, or next, but begin the good work and it will not be many years before we can. Industry, science, economy—must be brought to aid us in the fulfilment of our purpose. Who are the men destined to rise in the agricultural world? I answer, those who read and reflect. Now, more than ever, has a time come when the farmer must think. He that worketh ever so hard with his hands, if he work not with his head too, will find his intelligent neighbor far outstripping him, with half the physical labor he exerts. And those men, so wise in their own conceit as to suppose that they can learn nothing from a book or paper, on farming, will discover their error, perhaps too late to retrieve it. H. C. W. *Putnam Valley, N. Y., Feb.* 1, 1849.

Profits of Sheep Husbandry.

Farming in Vermont.

Eds. Cultivator—"What is the most profitable course of farming in your section of the country, and what is the cost of producing a pound of Merino wool?" These inquiries are frequently made, and they are very important questions, particularly as to those who have been grain growers, and are about to engage in sheep husbandry, or in the making of butter and cheese. I find it very difficult to adopt any method which will give a true estimate of the cost of producing a pound of wool, or of butter and cheese. I find the estimates that have been made vary greatly in their results. Should I attempt to answer these questions, I could hardly hope for better success than has attended the labors of others. In this section, grain is out of the question. There is no more raised than is necessary for our own consumption, and of wheat not sufficient for that. To cattle and sheep, the farmers of Vermont look for the most of their profits of farming.

I have looked at the estimates of different individuals, of the profits of sheep husbandry and of dairies. There is one on sheep husbandry, by H. S. Randall, Esq., of Cortland, N. Y., which is incorporated in a report on the value of sheep husbandry, read before the agricultural society of Pendleton, South Carolina, and is published in the Patent Report of 1847, page 505. According to Mr. Randall's estimate, the profits of sheep husbandry, are over 27 per cent. on the capital invested; and the cost of producing a pound of wool less than three cents; and a calculation, based upon Mr. Randall's estimate, makes the profits of sheep husbandry in South Carolina, over 100 per cent. That report also refers to the opinions of others, and says:—"Three very respectable gentlemen in each of the States of Pennsylvania, New-York and Ohio, say that one half of the wool will pay all the expense, where the winter requires five months' feed." It is evident from the language of that report, that the estimate, corroborated by the gentlemen from Pennsylvania, New-York and Ohio, is received as correct; and little weight, probably would be given to any estimate that should vary greatly from one made from so experienced and intelligent a wool-grower, as Mr. Randall. I certainly should not attempt it until I had given the subject a careful examination. I do not question the statement of the product of A.'s 100 ewes; their product of both wool and lambs, is less than many flocks of that number have produced. The profits of 100 ewes ought not to be taken as a test of the profits of sheep husbandry. We might as well take the product of one cow as evidence of the profits of a dairy; or 120 bushels of corn from an acre, as a test of the profits of grain growing.

The flocks of sheep in this county range from 200 to 2000 or more. The average produce of wool per head in the whole state, does not exceed 2¾ lbs.; and the average price per pound, for the last six years, has not been as high as thirty cents. I have the statement of one wool purchaser, of the amount of wool he purchased in the years 1842,—'3 and '4; the average per year was 110,000 pounds, and the average price 31¼ cents per pound; and this was in Washington county, New-York, which produces the best quality of wool. The income in flocks of 500, above losses, seldom goes as high as 25 per cent., many flocks not more than 10 per cent., and some no more than keep the flocks good. I hope none will engage in sheep husbandry with the expectation of receiving 27 per cent. on his capital invested. Farmers in general, are well satisfied if they receive 6 per cent. at the present low price of wool. Few farms will produce six per cent., over the expenses, on the cost of the farm. Some small pieces of meadow land may produce 12 or 25 per cent. on its cost. This subject ought to be investigated in reference to large farms, with buildings, woodland, &c. The fair way, and the one best calculated to present the question in a practical form, is first, to ascertain the true cash value of the amount of grass standing, that will be required to keep a certain amount of stock, and if this will sell for a sum that will be equal to six per cent. on the cost of the farm, the capital is considered in this section, to be a good investment. To change this into hay, and from hay and grass into wool, or butter and cheese, is a mechanical process; the profits arising from the operation, must vary according to the science, skill and economy used by the operator.

In this neighborhood, hay in the barn is worth $6 per ton, and good, smooth meadow, that will produce one, or one and a-half tons per acre,—the grass standing— is worth $4 per ton, and lands that produce one and a-half tons per acre, will be equal to six per cent. on the cost, at $100 per acre. I estimate 20 tons of hay for the wintering of 100 good breeding ewes. The lowest estimate is 15 tons. The pasture to keep 100 ewes and their lambs through the season, cannot be obtained for less than $36—ewes and lambs cannot be turned off until after shearing. If 33⅓ acres will keep 100 through the winter and summer, such lands must be worth here $48, or allowing but 15 tons of hay to the 100 ewes. There are lands in this county that may produce that amount of hay and grass, that can be purchased for $20 per acre; but they lie on the mountain, where the hay cannot be taken away without great expense. In passing through Cortland county, I saw no such lands. The difference in the result of Mr. Randall's calculation and mine, arises from the different value we put upon the lands. Taking the same number of acres and ewes, my estimate would be as follows:

A. buys 33⅓ acres of land, at $48 per acre,.	$1600 00	
100 ewes, at $2,	200 00	
Cutting and curing 11 acres of above land,..	18 00	
Washing and shearing,	5 00	
Summer care and salt,	10 00	
Winter and spring care,	30 00	
Loss,	4 00	
		$1867 00
Receipts—300 lbs. of wool, (the same as by Mr Randall's estimate,)	$118 71	
80 Lambs, at $1,	80 00	
		$198 71

If the owner let his land and sheep, the account would stand thus:

Interest on the money paid for land and sheep at 7 per cent.,	$126 00	
Other expenses as before,	67 00	
		$193 00
Receipts as before,		198 71

By my estimation, sheep husbandry is good business. The owner of the land and stock, gets 7 per cent. interest on his capital; and the tenant gets $5.71 over full pay for all his labor. I have omitted the credit for manure, as that must be returned to the land.

I will now take a farm in this county worth $7,000, pleasantly located and conveniently situated for school and meeting, with good buildings, orchard, and woodlands. This farm will keep 500 sheep, two cows and a team to carry on the farm. The owner stocks the farm with sheep, hires all the work pertaining to the sheep, and lets the cows, team, orchard, &c., and receives one half the avails of them.

Interest on the $7,000. at 6 per cent.,	$420 00	
500 sheep at $1.25—$6.25,	37 50	
Cutting and curing 80 tons of hay,	100 00	
Summer care and salt,	12 00	
Washing and shearing,	25 00	
Winter and spring care,	75 00	
		$669 50
Deduct the receipts over the wool,		275 00
		$394 50
Receipts.—1375 lbs. of wool, at 33⅓ cts. per lb.,	$458 00	
25 per cent increase,	125 00	
Receipt from plow land, &c.,	150 00	
		$733 00

Cost of producing 1,375 lbs. of wool, $394, equal to 28¾ cents per lb.

According to this estimate, the owner, by stocking his farm with sheep, has a larger income than by selling his hay, and by this process he keeps all the manure. This is a good dairy farm. Let it now be stocked with cows—500 sheep are equal to 50 cows. I do not believe that the income from cows managed wholly by hired help, would be as great as from sheep; everything pertaining to the management of a dairy requires extraordinary care. I will mention one fact to show what a little negligence may do to lessen the profits of a dairy. The dairyman had no cold stream of water to cool his milk and made use of ice,—the curd from the milk, when the ice was used, weighed 90 pounds. The next day after his ice failed, the curd from the same quantity of milk weighed but 70 pounds, of course inferior in quality. This loss must be equal to $1 per day Let this farm be stocked with cows, be let out to an experienced dairyman, and the whole receipts will be over $2,000. I know some dairies where the income from the cows will average $40 per cow, and others, not over $17. The cost of producing a pound of cheese in one of these dairies, is double that of the other. Some of this difference may arise from a difference in the goodness of the feed of the cows. There are, as far as my knowledge extends, much greater improvements made in the management of dairies than of sheep. Let the same care, skill, and attention in the management of sheep as there are in dairies, and the profits of sheep husbandry would be increased 100 per cent. I have had considerable experience in both. I formerly kept a dairy and made it profitable. I keep from five to six cows now.

When I engaged in sheep husbandry, I had a fine flock of Merinos. For several years, I suffered great losses; I had neither sheds nor experience to make sheep profitable. It was the opinion of wool-growers at that day, that sheep must not be confined to warm sheds. It was no uncommon sight in the spring of the year, to see 200 or 300 lbs. of pulled wool, and from 60 to 80 dead lambs. These were heavy drawbacks upon the profits and pleasures of sheep husbandry. Wool then brought from 55 to 75 cents per lb. and was the only income, as the increase did no more than keep the flock good:—the average amount of wool per head was not over three pounds. I have now changed my whole management. I keep through the winter, from 300 to 350 sheep; from them I select generally 110 ewes, over two years old, for breeding—never breeding from a ewe that will not produce at two years old, over four pounds of well-washed wool. I breed from the best rams I can obtain. I keep my sheep closely confined from the time they are put to hay until they are turned out to grass. I have 200 at one barn one mile from my house, about one-half of them lambs;—these are fed on lowland hay, twice a day, without any grain of any description. They have access to good water, and good Turk's Island or rock salt at all times. The flock kept at this barn has, for the last three years, been taken directly from the pasture to the barn, and there confined until they are turned out again to pasture. I commenced with hay on the 22nd, 23rd and 26th of November; turned to pasture the 6th, 9th and 13th of April—average time to hay being 19 weeks. Breeding ewes must be kept to hay at least two weeks longer. This year, this flock was confined on the 15th of November. There were three or four weeks of warm weather after this, during which sheep might have *lived* by grass. My breeding ewes, with the stock rams, are fed eight quarts of corn per day. I estimate 20 tons of hay, or what is equal to that, in hay and grain, for wintering 100 sheep. I keep an account of the sales of my wool and sheep, and will give the product of my sheep for the last three years, which is larger than any previous years', except one, and that was caused by the price of wool being very high that year.

Nov. 12, 1845, I had 309 sheep—Nov. 12, 1848, I had 319 sheep, being an increase of ten, and somewhat improved in quality.

I estimate the cost of keeping, the same as if I purchased the hay, and hired the pasture—calling the flock 300.

For 100 breeding ewes, 20 tons of hay, at $6 per ton,....	$120 00
For 200 other sheep, 30 tons,..........................	180 00
Pasture for 100 ewes and their lambs,....................	36 00
Pasture for 200 sheep,................................	40 00
Washing and shearing,................................	15 00
Winter care, and salt for the year,......................	20 00
	$411 00
Receipts.—Wool for the first year, 1846—1238 lbs., at 40 cents per lb.,......	$495 20
Clips of 1847—'8 not sold, worth now, say,...............	800 00
Sale of sheep, 1st year,................................	380 00
do 2d year,................................	509 00
do 3d year,................................	416 00
	$2600 20

I have not included in the expense of keeping the sheep, the interest on the capital; that can be done by others. It must vary greatly in different locations; also, in the value of the sheep.

For the last ten years, I have not lost one per cent. of old sheep, nor over two per cent. of lambs. Of the flock of 200 kept in close confinement, I have lost but three during the three years past, and so far on the fourth year; one of these got hung in the rack, and the other two died with the stretches. Not one during the three years has scoured, or been in any way sickly.

In 1826, I had over 150 full blooded Merino ewes and 200 grade sheep, and 1100 pounds of wool was nearly the whole amount of the income that I received from them. The labor of taking care of them was twice as great then as now, and the cost of keeping them much greater. I am now convinced that a flock of 500 or more, can be made to produce as well as a smaller flock. The cost of producing a pound of wool must vary according to the amount of wool produced per head, for it costs no more to keep a sheep that will yield four pounds of wool, than one that yields but two pounds. This alone diminishes the cost of producing a pound of wool; and if the increase of the flock should be equal to 33⅓ per cent., the cost is still more reduced. The cost of producing must decrease, as the flock increases.

A small portion only, of the farms in Vermont, are suitable for dairies. No lands in New England are more productive than the valleys of Battenkill and Otter creek. A large portion of the pasture lands are too remote from the buildings, and in many respects unfit for dairying. Yet they are productive; and though they are high, rocky side-hills, make the best of sheep pasture. There are some of 400 or 600 acres in a body, suitable for a farm, having a suitable portion of excellent meadow land, producing from half a ton to two tons of hay per acre. One of these farms, of about 500 acres, with a house and two barns, was purchased for $2600. This farm will keep 40 or 50 cows, or 500 sheep—more than some farms that cost $7000 will keep.

I know of one dairy of 20 cows that produces 10,000 pounds of cheese for sale, 300 pounds of cheese for the family, and 600 pounds of butter; this, with calves, whey and milk for hogs, will average over $42 per cow. This dairy is managed by one man, his wife, and one young man and a girl. Another, with the same number of cows, and one-third more help, does not produce one-half of that amount. In the trial of a case in court, a short time since, it was proved that 100 pounds of dry hides had been so managed as to produce 160 pounds of good sole leather, and in one case, as high as 182; while another, with unskilful management, produced but 130 pounds, and it is said that leather, giving the most weight, is worth two cents more per lb. than the other. This difference is caused by knowing how to open the pores of the hide to receive the tan, and then, to use the words of the manufacturer, "pursue the same course that you would to fat a hog,—feed as much good feed as the hide will receive without clogging it." This principle will apply to any product of the farm. The more flesh you put on an animal you fat, or the more butter and cheese you make from the same quantity of milk, the more valuable is the article by the pound. In the case of the tanner, let the unskilful manager tan the same amount of hides that the other does, and the difference in the receipts from the leather, (on account of the greater number of pounds, and the increase in price,) would be more than $6,000 per annum. The unskilful manager has one advantage over the other; it does not cost him half as much to transport his produce to market.

That is evidently the most profitable course of farming, that is managed best. A moment's reflection will satisfy any farmer of the folly of changing from one course of farming to another at every rise and fall of the prices. There seems to be a greater disposition in wool growers to jump out of the business at every fall in the price of wool, than in any other class of farmers. There is no reason for that. Beef, pork, butter, cheese, grain and wool, are articles of general consumption, and will, in a cycle of five years, command fair prices. Nor has wool fluctuated more, if as much, as most other articles. Flour has varied from $12, to $3.75; pork from $23.13 to $9.27; beef from $14.98, to $5.75; butter, cheese, cattle, and horses, as much. Let every wool grower follow the rules for breeding that are established for all other kinds of stock among good husbandmen; see that his sheep are provided with water and warm sheds, which may be done at little expense, and he will, in this cold, windy country, save much fodder; increase greatly both the quantity and quality of his manure; and by good attention to feeding, he may add 25 or 50 per cent., (just as he pleases) to the value of his wool, and the increase of his flock. But so long as sheep husbandmen manage their sheep, (and many do) as the French Canadians do their horses, permitting every thing to breed that has hoofs, whether they can chew the cud or not, they have no reason to look for any thing better than a flock of miserable *half wooled Keenucks*. If such a flock ever increases, the increase must be sold for 50 cents per head or less, for pelting; or the purchaser be permitted to select the best at 80 cents or $1 per head.

With all the light we have on the subject of improvements, we must agree with those who say—"After all your talk about science in agriculture, these are not the men who make money and get rich." They may not be the men that get rich. They make money and spend whatever may be necessary for their comfort and the improvement of their minds. A 6 by 8 country newspaper would cloy the literary appetite of these no improvement farmers, and a pistareen would generally cover all their subscriptions for pious and charitable purposes. Such wool-growers had rather pick a dead sheep than pay out a York six-pence for improvements in breeding animals or sheds.

Now after all this long talk, I must confess my utter inability to answer either of the questions at the head of this article, in a manner to satisfy even my own mind. I therefore leave it to others, to decide which is the most profitable course of farming, and make their own estimate of the cost of the articles they produce; being convinced they will feel justified or condemned, according to the greater or less amount of income produced from the capital employed. J. S. Pettibone. *Manchester, Vt., Jan. 16, 1849.*

The Poultry Yard.

Varieties of the Domestic Fowl.

The Dorking Fowl.—This breed takes its name from having been formerly bred chiefly in the neighborhood of Dorking, a town in Surrey, England. They were originally distinguished as having five toes to each foot, and as being of a white color. Their origin is not positively known. Some have supposed the breed to be of great antiquity, and in support of this hypothesis, have referred to the fact that five-toed fowls existed anciently in Greece, as noticed by Aristotle, and that Pliny and Columella spoke of similar fowls being known in Italy in their day. But we do not see that there is the least evidence that those fowls were Dorkings; or that the Dorkings have descended from them. Certainly, the circumstance of both having a supernumerary toe, is of itself no proof of affinity of blood. It is by no means, a peculiarity confined to the Dorkings; the writer has in several instances seen it in the Polish, and in the Bantam breeds. There is no doubt that it is a mere freak of nature, similar to the production of an extra finger or toe in some families of the human race.

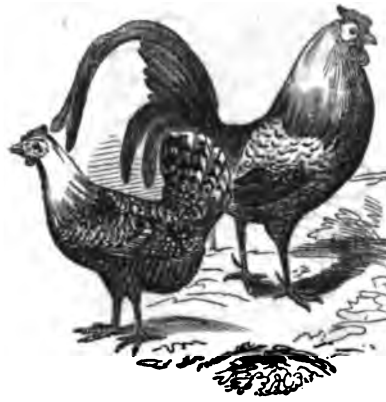
Arthur Young, in his *Survey of Sussex*, written in 1813, says—"The Dorking Fowls, as they are called, are reared in the weald of Sussex, but the finest market for them is Horsham. The five-clawed breed have been considered as the best sort; this, however is a great mistake, and it took its origin in some fowls with this peculiarity, that happened to be very large and fine, which laid the foundation of what has since been called the Dorking or five-clawed fowl. *** It is a bastard breed."

Dickson, in his treatise on poultry, says of the Dorking—"It is very probable that this large breed is a cross between the Malay, or shack-back [shake-bag,] and the game variety." The same idea is advanced by a writer in the *Scottish Quarterly Journal of Agriculture*, vol. VI. p. 381. Others have supposed the breed originated by a cross of the Malay and Poland, or Hamburgh fowl.

Martin objects to the idea that the Dorking fowl is of Roman lineage, and observes that if it was of ancient introduction, it is surprising it should, until lately, have been so isolated in its locality. He alludes to the fact that five-toed fowls are found in Germany.

But though the Dorking was formerly represented as a five-toed variety, and as being uniformly of a white color, many of the best known under that name of late years, have had only the customary number of toes, and have been of various colors. In fact it is stated by Martin, whose work was published in 1848, that those of a white color are now seldom seen." He adds—"During a recent visit of some weeks to Dorking, though we visited the market regularly, and explored the country round, on one or two occasions only did we meet with pure white birds. In all, however, more or less white prevailed; but the cloudings and markings of the plumage were unlimited. Many were, as we observed, marked with bands or bars of ashy gray, running into each other at their paler margins." Those which he saw, had the five claws; but Dickson and several other writers state that many have only the ordinary number. Such is also the case with many we have seen that were bred from imported stock.

In size, the Dorking ranks next to the Malay tribe. It is short-legged, and large-bodied, and readily accumulates flesh, which is of good quality. The hens are good layers. The breed has been introduced from England, and has been bred in this country for several years. They have succeeded well in many instances, though we think they are generally more subject to disease when young, and have less hardiness of constitution, than some other varieties.



41—Bolton Grey, or Creole Fowls

The Sussex fowls, which are said to be more or less crossed with the Dorking, are considered some of the finest in England. They are described as longer in the body than the Dorking, and as equalling them in weight.

The Bolton Grey, or Creole Fowl.—This is a very handsome variety, the origin of which we are unable to trace. The writer first saw it upwards of thirty years ago, under the name of the "Leghorn breed." In size, the Creoles are rather less than the ordinary game fowl. Their bodies are round and plump; legs short, sometimes yellow, occasionally lead-colored; heads small, finely turned, and generally surmounted with rose combs. The best of the variety have the neck-feathers pure white, those of the body white, with small black spots, sometimes running into a grizzle; the tail-feathers darker, with transverse black bars. The tails of the hens are unusually elevated, and are spread out, like a fan, during the laying season. They are chiefly esteemed as layers. It is one of the most ornamental varieties we know.

The Bantam Fowl.—The origin of this variety, as we have shown from Martin, (see current vol. pp. 18, 19,) is the Bankiva jungle-fowl; and it received its name from having been brought from a district or town in Java, called Bantam.

These fowls are the least in size of all the gallinaceous tribe. There are several varieties. Some have the legs plumed with long feathers, down to the toes; but the clean-legged varieties are usually most esteemed. There is a very handsome variety which is often red, with a black breast. But the most celebrated breed, is that known as Sir John Sebright's (fig. 42,) it having been brought to great perfection by that gentleman, after years of care and attention. It is thus described by Martin:

"It is very small, with unfeathered legs, and a rose comb and short hackles. The plumage is gold or silver spangled, every feather being of a golden orange, with a glossy jet black margin; the cocks have the tail folded like that of a hen, without the usual recurved drooping sickle feather, or rather these feathers are abbreviated, straight or nearly so, and broader than usual. Hence the term *hen-cocks* often applied to them. But although the sickle feathers are thus modified, no bird possesses higher courage, or a more gallant carriage. The attitude of the cock is indeed singularly proud, and we have often seen one of them bear himself so haughtily, that his head, thrown back as if in disdain, has nearly touched the two upper feathers of his tail. Half-bred birds of this kind are not uncommon, but birds of the pure breed are not to be obtained without trouble and expense; indeed, some years ago, it was almost impossible to procure either a fowl or an egg."

42—SIR JOHN SEBRIGHT'S SILVER BANTAMS.

Bantams are, of course, kept chiefly as a curiosity—they are *fancy fowls*. The hens are good layers, and the eggs are of delicate flavor. The flesh is also fine in the grain, and of superior quality; but they are too small to be saleable in the market.

In addition to the varieties of fowls above enumerated, there are some others which deserve a passing notice. Among these may be mentioned the following:

The Persian or Rumpless Fowl.—This breed is chiefly remarkable on account of its being destitute of a tail. It is supposed to have been brought originally from Persia. We are not aware that the breed possesses any particular valuable quality. It is not uncommon in this country.

The Frizzled or Friesland Fowl.—According to Martin, this breed is originally from Eastern Asia, and is often seen in Java, Summatra, and in India. It is occasionally met with in America, but is not common. It is a mere variety, and not a distinct species, as some have supposed. It takes the name of *frizzled* from the feathers—with the exception of those of the tail—being turned or curled towards the head, giving the fowl the appearance, as has been facetiously remarked, of having been "drawn backwards through a brush-heap." They are tender—the feathers do not afford protection against wet, and they are unable to bear exposure.

The Silky Fowl.—This is another accidental variety, which Temminck described as a distinct species under the name of *Gallus lanatus*. We have known several instances of fowls of this description having sprung from those of the ordinary character. They are more difficult to raise than common fowls, owing to their destitution of feathers.

The Russian Fowl.—This appears to be only a variety of the crested fowl, differing but little from the Polish and Hamburg breeds, excepting that it has, in addition to a large top-knot, long feathers, like a beard, springing from the under side of the throat.

The terms "**Barn Door Fowl**," and "**Dunghill Fowl**," are applied to all fowls which are of no particular variety, and in regard to the breeding of which no particular attention is paid.

We will remark in conclusion that, though we do not think it advisable that every person who keeps fowls should become a professed *fancier*, yet we think with Martin, that "more systematic care should be paid by the farmer than is generally done, that less should be left to chance, and some discrimination exercised in the choice of stock. We do not claim for the fowl a weight in the scale of importance equal to that of the ox, sheep or hog; at the same time we contend that the importance of poultry is greater than at first sight might appear; consequently, that all attempts to establish good breeds, at once hardy, white fleshed, quick fatteners, and abundant layers, are meritorious; nor indeed are the labors of the professed fowl-fancier to be regarded as useless. Were it not for his labors and care, the continuance of no breed, it is to be feared, would be effected. There would be no stocks to which to apply, by way of correcting the degeneracy of any race."

Value of Bones as a Fertilzer.

Eds. Cultivator—In the slight measure of agricultural reading which it has been my good fortune to enjoy, I have frequently been surprised to find, there were those who, to judge by their writings, were in doubt respecting the great value of bones as a manure. With us, their exceeding great value has long since passed to a proverb. Our most stubborn farmers,—those who have been the most wedded to their old notions, and the most opposed to all *new* things,—have ceased from doubting, and not only admit their fertilizing properties, but use them freely; but, as I said before, there appears to be some who are yet skeptical, and who can not realize the important fact, that these apparently indestructible matters contain properties of the most fertilizing character. For their benefit then, with your permission, I will use the columns of your valuable journal, to lay before your readers, some facts which have come under my observation, and which have not only convinced me, but likewise all those who have been familiar with them.

Some twenty or twenty-five years since, on the banks of this beautiful stream, from the banks of which I am now writing, and the name of which I have assumed as my agricultural *nom de guerre*, there existed a farm, which, as has been but too frequently the case, was worn and exhausted to a degree that those who see it now, for the first time, would scarcely credit. It would not convey an accurate idea of its sterility, were I to say, it had been exhausted by excessive cropping, for that would only imply that the prolific property of the soil had been spent; but in this instance, not only had that been the case, in the fullest sense of the word, but the soil itself had been washed from its whole surface. It was almost surrounded by the waters of this stream, and being light and loamy, it had been washed into chasms and gullies in every conceivable manner. I can even now remember, when a boy, looking with compassion, upon its poor, miserable and forlorn appearance.

At about the period I have mentioned, it was purchased by Mr. W., a bone grinder, of Philadelphia,

—He employed an Englishman to farm it for him. I mention this matter, because at that time it would have been doubtful whether any of "*our free* and intelligent fellow citizens," could have been induced to stoop so low as to cart dry bones; but be that as it may, the course pursued by these persons—landlord and tenant—was to haul on bones of all kinds, principally however, ground bones and knuckle joints. I am sorry I cannot give you the quantity they put to the acre; but as I only wish to convince the skeptical, that there is virtue even in dry bones, it is not of so much importance. Suffice it then to say they were put on liberally.

When it was purchased by Mr. W., it would have been impossible for any person to have made a respectable living from it, even had it been given to them free of rent; but when he sold it, some ten years afterwards, it was decidedly one of the most productive farms in the neighborhood. From having been so poor that no other grass than red clover would grow on it, and not over ten bushels of corn could be produced to the acre, it was, in the short space of time mentioned, so much improved in fertility, that from one and a-half to two tons of timothy hay, or fifty or sixty bushels of corn could be raised to the acre, one season with another. After it passed from the possession of Mr. W., it went through the hands of various persons, either as owners or tenants, every one of whom pursued the skinning process. It was cropped and re-cropped, much hauled off and but little hauled on, and farmed without any regard to maintaining its fertility; but notwithstanding all this, it still, after fifteen years of constant skinning, maintains the character of being a most productive and valuable farm.

After Mr. W. sold this, he purchased another just as poor as the one mentioned; with this difference however, the latter one was level, cold and clayey. He pursued the same course with the latter that he had heretofore done with the former;—and the result was precisely the same. After a few years cultivation, in this manner, the improvement was so apparent, and his crops were so luxuriant, that our old-fashioned, plodding farmers were compelled to admit, that, in this instance at least, bones had proved a most powerful fertilizer.

I might here rest my case and claim a verdict in my favor; but I have, in my mind's eye, one more which is perhaps as conclusive as either of the others.

Some fifteen years since, a gentleman purchased a farm very much of the character of those mentioned above. He was desirous of having it brought to a higher degree of fertility. To do this, he began to haul manure from the city of Philadelphia, a distance of some ten miles; but he found the cost, wear and tear, and destruction of horse flesh, were more than he bargained for, and accordingly he soon abandoned it. Just at that time, he engaged the scraps from a button factory—these are the pieces of bone after the button has been sawed out—he spread them on his land at the rate, I think, of seventy or eighty bushels per acre; and now there are few farms more productive than his, made so almost solely by the use of this manure.

I might go on for a week, instancing cases wherein this same result has followed the same course, just as invariably as the sun traces its course through the heavens; but it would exhaust your patience; nevertheless, at the risk of doing so, I cannot refrain from giving you my own experience in the matter.

Four years since, I put in some wheat, part with thirty bushels of ground bones to the acre, which cost some ten dollars; and along side of it another piece, with stable manure, at a cost of fifteen dollars per acre, at city prices. At harvest, that part manured with stable manure was much the best, fully equal to the difference in the cost. The year following, both parts were in grass—the following year in corn, and after that in oats, in all which crops, that part manured with bones was decidedly the best; the crops on it were fully one-third greater.

The following season I put in three pieces of wheat, one with about twenty loads of barn yard manure, one with fifty bushels of poudrette, and the last with fifty bushels of ground bones to the acre. At harvest, the part manured with poudrette was the best; the part manured with yard manure the second best; and the part with bones almost an entire failure. That season the fly was bad, and this part having a late start, was harvested by them so completely that I did not get back my seed; but I made it all up the last season with grass; for the product of that part on which bones had been put, although before the poorest part of the field, was greater than that of either the others.

The following season I pursued the experiment still further. In putting in wheat, I selected two lots of an acre each, lying side by side, of precisely the same kind of soil, formed from the disintegration of mica and quartz. On one I put twenty loads, two horse wagon loads, of barn-yard manure which had been housed from the rains, and had been well tramped by the cattle; on the other, fifty bushels of the refuse bones from an ivory black factory, consisting of those parts of the animal frame which were not firm enough for the manufacturer's purpose, and mixed with some portion of boiled animal muscle, the whole costing about ten dollars per acre. The result of this experiment was, that where the yard manure had been put, the wheat, in the early part of the season was much the best, and remained the best at harvest, although by that time, the difference was not so perceptible; but when, last season, it was mown, the difference was greatly in favor of the bones. The product was so much greater, that skepticism itself could not raise a doubt.

I have been sorry a hundred times since, that an accurate measure of the products of the various trials was not taken; but as they were undertaken merely for my own satisfaction, and with no thought of publication, it was passed over as not worth the trouble.

Whether the facts warranted above are such as to convince any one of the unequalled value of this manure, both as to its economy and lasting properties, is for others to determine; but if they should not do so, my advice would be, to any practical farmer who doubts, to try from ten to fifteen dollars' worth to an acre upon his wheat crop, spread broadcast and harrowed in; and if that does not convince him, he must indeed be hard to satisfy. PENNEPACK. *Lower Dublin, Pa., Feb.'49.*

The Veterinary Department.

Stretches and Scours in Sheep.

EDS. CULTIVATOR—Your correspondent, R. G., of Jefferson county, Ohio, wishes some information in reference to the cure of scours and stretches. I would inform him that the first indication in the cure of disease, is, to remove the predisposing, or direct cause.

"The disease was, perhaps, in the first place, induced by feeding on green frosted oats, and clover, late in the fall." Then I would advise Mr. R. G., and every other farmer, not to suffer their animals to feed on such indigestible materials again, or any other article of the same nature.

"As to stretches," your correspondent states "that it is most troublesome and fatal, amongst those flocks closely yarded, and fed exclusively on dry feed." It would be something very remarkable if the flock did not manifest some signs of stretches, constriction, or constipation; let any one of the human family confine himself to a narrow atmosphere, and subsist on hard ship-bread for a short time; obstinate constipation will in nine cases out of ten, supervene. Medicine has but little power over such derangements, while the exciting or direct cause exists. This will, in some measure, account for the unfavorable result, attending the administration of Mr. Morrell's prescriptions.

"I have always found that the quantity of medicine necessary to act as an *opiate* on this dry mass," alluding to that found in the maniplus, "will kill the animal. If I am mistaken, I will take it kindly to be set right." You are quite right.

Let us see what Professor J. A. Gallup says, in his Institutes of Medicine. Vol, II. p. 187. "The practice of giving opiates to mitigate pain, &c., is greatly to be deprecated; it is not only unjustifiable, but should be esteemed unpardonable. It is probable that for forty years past, opium and its preparations have done *seven times the injury* that they have rendered benefit"—killed seven where they have saved one! Page 298, he calls opium the "most destructive of all narcotics," and wishes he could speak through a lengthened trumpet, that he might tingle the ears" of those who use and prescribe it. All the opiates used by the Allopaths, contain more or less of this poisonous drug. Opiates given with view of softening the mass alluded to, will certainly disappoint those who administer them; for, under the use of such "palliatives," the digestive powers fail, and a general state of feebleness, and inactivity ensues, which exhausts the vital energies.

It will be found in stretches, that other organs, as well as the "maniplus," are not performing their part in the business of physiological or healthy action, and they must be excited to perform their work; for example, if the food remains in either of the stomachs, in the form of a hard mass, then the surface of the body is evaporating too much moisture from the general system; the skin should be better toned. Pure air is one of the best, and most valuable of nature's tonics. Let the flock have pure air to breathe, and sufficient room to use their limbs, with proper diet, and there will be little occasion for medicine.

In scours, the surface evaporates too little of the moisture, and should be relaxed by diffusable stimulants in the form of ginger-tea. The treatment that I have found the most successful, is as follows: take four ounces raw linseed oil—two ounces of lime water—mix. Let this quantity be given to a sheep on the first appearance of the above disease; half the quantity will suffice for a lamb. Give about a wine glass full of ginger-tea at intervals of four hours. Let the animal be fed on gruel, or mashes of ground meal. If the above treatment fails to arrest the disease, add half a tea-spoon-full of powdered bayberry bark to each wine glass of tea. If the extremities are cold, rub them with the tincture of capsicum.

"The feeding of pine boughs, we have formerly practiced and think to be useful." Eds. of Cultivator. Pine has a revulsive action on the skin, is stimulant and diuretic, and if used occasionally might be the means of preventing many forms of disease in animals. Geo. H. Dadd. *Boston, Feb.*, 1849.

Diseases of Cattle.

Abortion in Cows.—The cow is more subject to abortion than any other of our domestic animals. She is liable to this at different periods of pregnancy, from the fourth to the eighth month. Mr. Youatt remarks, what has been often observed by others, that "abortion is sometimes singularly frequent in particular districts, or on particular farms. It seems to assume an epizootic or epidemic form. Some have imagined it to be contagious. It is destructively propagated among the cows, but this is probably to be explained on a different principle from that of contagion. It has been said that the cow is an animal considerably imaginative, and highly irritable during the period of pregnancy. In abortion, the fœtus is often putrid before it is discharged; and the placenta or after-birth rarely or never immediately follows it, but becomes decomposed, and as it drops away in fragments, and emits a peculiar and most noisome smell. This smell seems to be singularly annoying to other cows—they sniff at it, and then run bellowing about. Some sympathetic influence is produced on their uterine organs, and in a few days a greater or less number of those that have been kept together likewise abort."

In regard to treatment of abortion, Mr. Youatt directs, that if the farmer has ever been troubled with this pest, he should closely watch the approaching symptoms of casting the calf, and as soon as he percieves them should remove the cow to an apartment by herself. That he should bleed her, and that copiously, in proportion to her age, size, condition, and the state of excitement she is in; that he should give her a dose of physic immediately after the bleeding; after the physic begins to operate, he should administer half a drachm of opium and half an ounce of sweet spirit of nitre. Give the cow gruel, and keep her as quiet as possible. By these means, the irritation may be allayed and the cow may go her full time. But if the discharge is fœtid, "the natural conclusion will be, that the fœtus is dead, and must be got rid of as speedily as possible. Bleeding may even then be requisite, if much fever exists. In other respects, the animal must be treated as if her usual time of pregnancy had been accomplished." He further directs as a means of *preventing* the formation of this habit among cows, that as soon as the fœtus can be got rid of, it should be immediately buried deep, and far from the cow-pasture. A cow that has repeatedly aborted, should be fatted and slaughtered.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Short Seasonable Hints.

Tender Shrubs, *grapes, strawberries, &c.*, covered late last autumn from frost, should be uncovered early, before injury may have taken place by close packing and confinement, which is always greater after a winter's settling.

Small banks or mounds of earth, which may have been thrown around trees to protect them from mice, should be levelled down at an early period.

Orchard Caterpillars should be thoroughly cleared from the trees before or at the time of hatching. A little practice quickly enables any one to perceive the little knobs of eggs near the ends of the twigs, to cut them off and burn them. Every one of these little knobs is an embryo nest of caterpillars. They hatch simultaneously with the opening of the buds; and if not before removed, the white spiderweb down which the young worms thickly wind about their nest, even in the short space of a day or two, greatly facilitates their ready detection. It may be very readily comprehended how much easier it is to rid a branch of a nest when only the hundredth of an ounce in weight, than after the size has increased to two or three pounds.

Raspberries need early pruning. Clear away the old stems, and leave only half a dozen of the strongest of the new. Their upper extremities are to be shortened a foot or two, and the remaining stems, if not of a stiff and upright variety, to be tied to a stake.

Trees in Bud, or which were budded last summer, should be headed down, leaving the inserted bud alone to grow. But if cut too closely, the stump of the stock will become partially dry down below the place of the bud, and endanger its growth; hence two or three inches must be left until some inches of growth are made, and to this stump the young shoot is tied to straighten the tree. The stump may be cut closely about mid-summer or sooner.

Young trees, lacking vigor of growth, may be manured by spreading compost or yard manure over the surface for some feet from the tree, and spading it in. For the peach, pear, and apple, the application of ashes, (if leached, they are highly valuable,) and lime, is usually found of eminent service.

Preparing for transplanting, should be done in the most thorough manner. Large holes, six or seven feet in diameter, and a foot and a-half deep, filled with rich mould, will be found cheaper for most kinds, than holes just large enough to crowd the roots in with some difficulty. A still better way is, to subsoil and trench-plow for one year previously, either the whole surface, or a strip ten feet wide where the row of trees is to stand, thoroughly mixing in manure, muck, and ashes, in compost, by the process of plowing and tillage. Now, does any one start up in alarm, at the cost of this preparation? As well might he become frightened at the expense of setting out his trees at all,—and indeed with a great deal more propriety, at the hasty and superficial style; for fifty apple trees, thoroughly set out at a cost equal to the price of fifty more, will yield in ten years, more than twice the amount of fruit to be obtained from the full hundred without care or preparation, to say nothing of the superior quality.

Pruning connected with Transplanting.

Every cultivator must have noticed the great difference between the vigor of growth, and the power of producing new shoots, possessed by those more southern species, the peach and the grape, than those of more northern origin, as the apple and cherry. Hence the greater necessity of pruning the peach and grape, to improve the quality of the crop, and prevent a redundancy of wood and leaves.

This reproducing power enables the cultivator to secure an important advantage in transplanting. The shoots of a grape-vine, when set out, may be cut back to two or three buds, and it will quickly throw out a new growth. The peach will do the same. It hence becomes far safer in removal to lessen the number of buds, until a corresponding growth of the root will support a heavy amount of foliage. This also explains the reason why peach trees may be set out *in the bud*, (that is, before the inserted bud has started,) with such great safety, and without diminishing the growth for the first, nor any subsequent year.

So important is the shortening back of the shoots of young peach trees when transplanted, so as to reduce to a-half or a-quarter, the number of buds, that we have had as good success in setting out trees three or four years from the bud, with this shortening, as in others only one year old, without it.

The Peach Crop.

Through a large portion of Western New-York, most of the peach crop has been destroyed by the severe cold of the late winter, the thermometer having sunk several degrees below zero. In favorable localities, a part of the fruit buds have escaped. Where the thermometer sunk to 10° or 12° below zero, nearly the whole have suffered. The fruit buds are capable of enduring a much lower degree of cold, if they have not been in the least degree swollen by previous warm weather; but it usually happens that a few mild days late in autumn or during winter, throw into them moisture enough to render them liable to destruction. The remarkably mild weather, at the commencement of the past winter, will be recollected by all, and it was observed with apprehension by those who knew the dangerous position in which it was placing the peach crop.

Large and Small Fruit.

The value which is placed on large size alone, has contributed in a great degree, to introduce poor fruits into cultivation. Where would have been the Monstrous Pippin or the Gloria Mundi (glory of the world) if it had been no larger than the Ross Nonpareil or Bullock's Pippin? Such "heavy orbs" as the Alexander, the Twenty Ounce, and Pound Sweeting, although not to be compared in quality to many others, have been suffered to eclipse them, until cultivators had their sight thoroughly satiated by gazing at the monsters, and the palate remained yet to be consulted.

There is less excuse for retaining such large sorts, because beyond a certain size for an apple, weight becomes an evil, by adding to the liability to bruise. For this reason, it is not desirable to have larger than the Gravenstein, Swaar, and Esopus Spitzenburgh, when well grown. Much smaller sorts, on the other hand, although they may be of high flavor, are less convenient in gathering, and have hardly space enough for a good mass of pulp between the skin and the core. Hence the value of Bullock's Pippin, and English Golden Pippin become greatly diminished; and even the Pomme Grise and English Russet, are less prized for falling a little below the standard of magnitude. Early apples, softer and more easily bruised, may be less in size than keepers; for which reason, the small figure of the Early Joe and Garden Royal should not be regarded as so serious an objection as with winter fruit.

With small fruits, as the cherry and strawberry, it is more important to secure large size. If it requires as much time to pick a peck of one of these, as a cartload of apples and peaches, doubling the bulk becomes a point of great convenience.

We have often thought that a classification of a few prominent varieties, according to their leading qualities of recommendation, would be interesting as well as useful:—

Fruits remarkable CHIEFLY *for large size:*—Monstrous Pippin, Pound Sweeting, Alexander and Kentish Filbasket apples; Belle et Bonne, Colmar d'Aremberg, Dunmore, and Cumberland pears; the Yellow Egg, Diamond, and Duane's Purple plums; and Methven and Wilmot's Superb strawberries.

For remarkable beauty alone:—Cranberry Pippin and Beauty of Kent apples; and Belle de Bruxelles, Columbia, Summer Belle, Jalousie and Forelle pears.

For fine flavor, but deficient in size:—Early Joe, Ross Nonpareil, Bullock's Pippin, (when well ripened,) Garden Royal, Golden Pippin, and Sam Young apples; Seckel, Eyewood, and Rostiezer pears; Green Gage and Frost Gage plums; and Duke of Kent strawberry.

Fruits of good quality, whose reputation has been assisted by fine or handsome appearance:—Dutch Mignonne, Red Astrachan, Williams' Favorite, Maiden's Blush, St. Lawrence, and Lady apples; Golden Bilboa, Bartlett, and Vicar of Winkfield pears; Cooledge's Favorite and Crawford's Early peaches; Washington and Cruger's Scarlet plums; Napoleon Bigarreau and Graffion cherries; and Hovey's Seedling strawberry.

Cherries arranged in order of their SIZE:—Napoleon Bigarreau, Black Tartarian (when not overloaded,) Graffion or Biggareau, Large White Bigarreau, Holland Bigarreau, Knight's Early Black and Belle Magnifique, Large English Morello, Black Eagle, Carnation, Florence, Elkhorn, Early Purple, Guigne and American Heart, Sparhawk's Honey, Gridley and Belle de Choisey, Downer and Madison Bigarreau, and May Bigarreau.

Pruning Young Apples—the Baldwin Apple.

Eds. Cultivator—Mr. Downing seems to think that our powerful sun reaches every part of the tree, and renders the minute system of pruning and training, which occupy so large a portion of the English works on this subject, of little or no moment to the cultivator here. I have been engaged in raising engrafted fruit about twenty years, and my impression is, that strict and minute attention should be given in the formation of the young apple tree. I have found that where the tree was suffered to take its own course, that in a great many instances, when it comes to bearing, the tree will be badly balanced, and some limbs having a greater amount of fruit than others, come in contact. When this is the case, the fruit on the younger limbs will not mature well. The best method of forming a tree that has ever been suggested to my mind, is at about seven feet from the ground, to trim all the limbs off but four, and them to be left in opposite directions—say to correspond with the different points of the compass. Passing up the main shaft of the young tree, about four ft. above the first tier of limbs, you should then leave four more young limbs, immediately over the spaces of the under tier of limbs. You can extend the same course as much higher as may be thought expedient. A tree pruned in the above described way, let it be ever so heavily laden with fruit, will not break in any part; besides, if one limb has more fruit on it than the others, when bowed down, it will not come in contact with limbs on the lower tier, because there is none immediately under it. When a tree is formed as above described, the fruit throughout the whole tree will be of an uniform size, and will mature better than when managed in any other way.

It is supposed by some that the Baldwin apple does not do as well south of New England, as it does there. I have had trees of that description in bearing for about fifteen years, in the vicinity of Wheeling, Va., which is in latitude 40° 10′. The Baldwin apple in New England I only know by reputation; therefore do not know how it ripens and keeps, when compared with other keeping fruit. My Baldwin apples are fit for barreling from ten to fourteen days sooner than any of my other fruit, and I have a goodly variety. If they are picked and barreled with care, and laid in some cool place, they will keep tolerably well until the last of February. They are very palatable and even delicious, and particularly so when we speak of them as a cooking apple. N. P. A. *Etna, O.*, 1849.

Raising Peach Trees.

Eds. Cultivator—I have been very successful in raising peach trees in a nursery, and the following has been the method practiced: I always procure pits of the common late variety, and none others, which are kept dry until about the first of March, when they are then soaked in barrels of water until the seeds are perfectly swelled with the moisture. The pits are then placed in layers on the surface of the ground, and covered with soil, where they are exposed to the frost until about the first of April, when they are taken out and carefully cracked by hand, and as fast as the seeds are taken out, they are thrown into a dish of water, which breaks the fall and prevents injury to the germ. The seeds should not remain too long in the water, as they are liable to be injured by an excess. The next process is to put them in a situation to germinate; and I have found a preparation of leaf mould and fine yellow loam sifted, much the best for the purpose; as the seeds are not liable to be injured in their removal, after they are sprouted, the preparation should be placed in a situation where the sun shines most during the day, with the peach seeds mixed through it The dark color of the leaf mould attracts the heat of the sun, and soon causes the seeds to germinate. The next process is the planting, which is a very important part.* After the ground is plowed and leveled, a line is stretched where the first row is intended to be planted. The line is spaced off at six to eight inches, and permanently marked, and a seed is to be planted opposite to each mark which makes great regularity in the growth of the trees, all having an equal chance. In putting the seeds in the ground, I use a common transplanting trowel to dig the hole for the seed, which is made about one inch deep. The root and seed is placed carefully on the side, and covered with moist and mellow soil. If the earth is very dry, it should be watered over each seed, to insure complete success. If any fail to grow, they can be made good by setting in plants of peach trees 2 or 3 inches high. The latter operation should not be put off too long, as peach trees will not grow well if transplanted after the roots turn red. After the trees are about three inches high, they should have the ground well loosened around them, and the surface between the rows well stirred with the cultivator. The trees need be hoed but twice during the first season. I always make it a practice to use the cultivator after every rain which occurs during the growing season, while the trees remain in the nursery. The rows should be made three and a-half feet distant from each other.

There is one other notion connected with the operation of growing peach trees. If seeds of the top onion are planted in the space between the trees, a crop of excellent onions may be grown, without being at all detrimental to the growth of the trees, and the quantity will at least pay one-half the expense of raising the nursery. The onions which I have raised in this manner, were of fair size, and the fact of their being shaded by the trees during the hot weather, prevented their becoming so outrageous strong as they generally are, when exposed to the full heat of the sun during the summer. The great *ultima thule* of growing peach trees, whether in the nursery or orchard, consists in stirring the ground often, especially after every rain which falls through the growing season; and this fact should be impressed upon the mind of every person who expects to realise his wishes in this matter. A regular system of operation should be adopted, and carried out; and is actually of as much or more importance than is necessary to their growth and welfare, (i. e.) the warmth of the sun, vegetable matter, air, &c. I have often noticed the sad effects of plowing or summer fallowing ground occupied by peach trees. Such an operation is almost sure destruction to them, from the fact of the fibrous roots being destroyed at a time when they are of the greatest importance for the nourishment of the tree; (the same will apply to the apple orchard.) My young peach trees are always fit to bud in August; and if it is done early, an opportunity is afforded to rebud any trees where the bud fails in the first trial. I cut or head down my inoculated trees about the last of March, and if I find any trees whose buds failed to grow, I immediately dig them out and throw them away, as of no importance, for I consider it better to raise anew, than to bother with old, as they obstruct the free growth of buds around them, being of better constitution than most of the improved kinds. Isaac Hildreth. *Yates Co., N. Y.*

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* When the seeds are taken out for final planting after being sprouted, they should be covered with a wet cloth to prevent the gum from drying in the sun or wind.

Pruning Young Pear Trees

I have a number of pear trees from grafts inserted last spring, which have made from 3 to 4½ ft. of wood the past season; consequently they are so slender they will not support themselves without staking. Should they be headed back in the spring, so as to ensure a more stocky growth, or shall I continue to stake them until the trees are sufficient to support themselves? The trees are of the Beurre Bosc variety. W. Doolittle. *Borodino, Onondaga Co., N. Y.*

It would doubtless be best to stake the trees in the first place. Cutting them back half way down, would make crooked stems, and cutting down wholly, would only cause a repetition of the same difficulty another season. If they throw out side shoots, nip off the ends after they have grown some inches. This course will soon render the tree stiff. But in any case, the tree will become better able to support itself as it grows older, provided the stem is not kept closely trimmed up, which enlarges the top faster than the tree has strength to support it, the result of a very common error of the inexperienced. It is better to lessen the top, and suffer side shoots to remain one year, which will give the stem a gradual taper upwards, so essential to strength, instead of the long and uniformly slender form from repeated close trimming.

To Prevent the Ravages of the Cut Worm.

Eds. Cultivator—Most gardeners have experienced a great deal of vexation from the destruction of their plants by the cut worm. The cabbage plant appears to be in special favor with these destructives. They are much more abundant I think in southern gardens than at the north, and in many gardens, the plat devoted to cabbages has to be often almost entirely replanted. There is a simple and *efficient preventive* which requires only to be known to be universally practiced when necessary.

On the site of your intended row of plants dig a narrow trench three or four inches deep, and in the bottom of this trench set your plants as usual, and the cut worm will not go into the trench to injure the plants. The experiment was fully tested the past summer by the writer, and proved perfectly satisfactory. When the plants have become a little stout and able to resist the enemy, the earth must be gradually gathered about them until the whole plat once more becomes a level. The plants will head with this mode of culture quite as well as by any other. I have left about half of the plat at times, to be set in the old mode, and from one-fourth to two-thirds of the plants have been destroyed, while not one in the trenches has been injured in the least. I had but little faith in the plan when first pointed out to me, but repeated experiments have satisfied me that it is an efficient one. I don't pretend to give the reason of the thing, though I am convinced of its efficacy. Wm. N. White. *Athens, Geo.*

Destruction of Fruit Buds by Frost.

The buds of the Peach and other tender fruit trees throughout this section of country, were all destroyed by the cold weather of the winter of 1847—8, so that in this section of country there was hardly a peach to be seen. I have about thirty thrifty trees of the above variety, from three to six years old, and last fall I did not have a single peach. On examination, I find there is a clean sweep made of them this winter also, as I cannot discover a living bud on any of them. The Nectarine and Apricot have suffered a similar fate. The degree of cold has been from 10° to 14° below zero, and it ranged at that for several days in January.

There is one circumstance that I cannot account for, and that is this: Our village is situated at the foot of the Shawangunk mountain, on the east, and it is thought not to be so cold in winter on the flat as on the mountain, by two or three degrees. I was presented the other day a branch of a peach tree, by J. Bennett, Esq. which he cut from one of his trees, with the buds all alive, and in a healthy condition, and he informed me they were not injured on the mountain; and where he lives is not more than a mile from our village.

Query—Why are they not killed on the mountain as well as on the flat? R. H. Drake. *Bloomingsburgh, Sullivan Co., N. Y.*

It is not very unusual for fruit buds to be killed by frost in valleys, when they escape on hills; and the reason is, that the degree of cold is greater in valleys at such times. It has been repeatedly proved that the mercury will sink several degrees lower on the banks of rivers, in still, cold mornings, than on points elevated 200 or 300 feet higher. The gravity of the air is in the ratio of its coldness, and consequently falls into the lowest places, when not disturbed by wind. Eds.

Seedlings vs. Suckers.

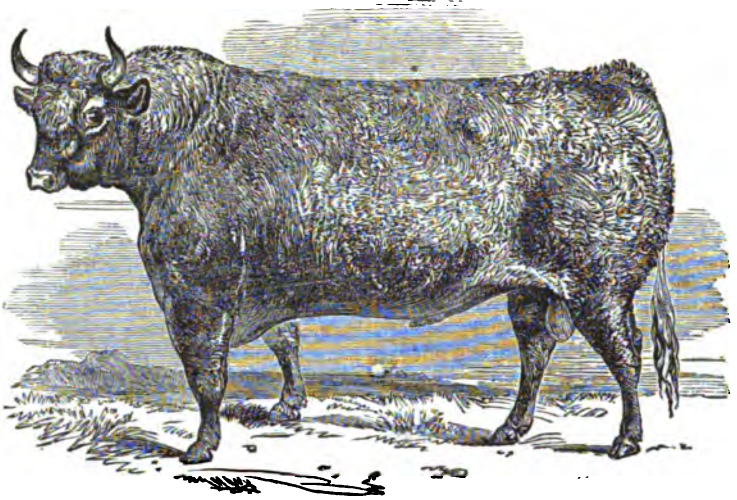
Eds. Cultivator—Notwithstanding all that has been written and published in our various Horticultural Journals respecting the merits and demerits of seedlings and suckers, as stocks for the production of fruit trees, I am of the opinion that the true cause of the inferiority of the latter for this purpose, has never yet been fully brought to view. Mr. Downing, than whom there is perhaps no higher horticultural authority in our country, says it is because "Suckers are always more liable to produce suckers." With all due deference to such distinguished testimony, if I may be permitted to speak from experience, (and it is by experience alone that the question can be determined,) I would say that the seedling is just as liable to produce sprouts as the suckers.

During the past year, I have trimmed with my own hands, preparatory to transplanting in the nursery, at least 50,000 seedlings, and I found invariably on the different varieties, many plants with from one to six suckers; and let any nurseryman try the experiment by trimming and shortening the tap root of any quantity of seedlings, and heel them in during the fall, letting them remain in the ground until the buds begin to expand pretty freely in the spring, and he will find sprouts or suckers enough to satisfy him of the truth of my assertion.

But the true cause of the inferiority of suckers for stocks, I conceive to arise from the fact, that they have been accustomed to derive their chief support from the parent tree, through the medium of the large tap-root which adheres to it, as the small rootlets thrown out are generally too feeble to extract much nourishment from the soil. When this large tap root is broken for the purpose of transplanting, and the sucker loses the support of the parent tree, it often exhibits a sickly life, and frequently dies of sheer starvation. The difference therefore in profit to the nurserymen, to say nothing respecting the interest of the purchaser, I regard as eqnal to two hundred per cent. in favor of seedlings. So thoroughly satisfied do I feel on this point, that I have long since determined to grow seedlings in sufficient quantities to supply myself with them exclusively, and thus avoid entirely the use of suckers.

Peach seedlings which are still used in some places quite extensively, as stocks for the plum, are still worse, and the public generally, I think, ought to be cautioned against them. Charles Hamilton. *Canterbury, Orange Co., N. Y.*

Be not in haste to turn cattle to pasture. It is best to keep them at the barn till there is a good *bite* of grass. Sheep may be turned out, on dry land, this month.



45—DEVON BULL.

Different Varieties of the Ox.

The Middle-Horns.

It is easy to trace our own breeds of cattle to the stocks of Europe. With the exception of those of South America, which sprung from animals taken from Spain, (see current vol. page 59,) they have been derived almost entirely from England. But our ideas of the origin of British cattle, must be in a degree conjectural. The progenitors of several of the present breeds were found in the possession of the ancient inhabitants of Britain, at the time of its invasion and conquest by Cæsar, fifty years before the Christian era. At what period, or in what manner those people, or their animals reached that country, cannot be told; they are events so remote that neither history nor tradition afford any light in regard to them.

In our remarks on the ancient Roman ox, (Feb. No. page 59,) we have alluded to the hypothesis that this primitive race formerly extended itself over a large portion of Europe, and that it may have been the origin of some of the British breeds. In the characteristics of these cattle, so far as we can judge, there is nothing which conflicts with this idea.

But whatever may have been the origin of the cattle of the British islands, it may be said that from the earliest times, two or three distinct tribes and stocks have existed there: viz. 1, the Long-horns, which originally occupied the low flat lands of England, and similar parts of Ireland, and were remarkable for the enormous length of their horns, their bulky frames and thick hides. 2, the Middle-horns, represented by the cattle of Devonshire, Herefordshire, Wales, and the Scottish Highlands; of which the semi-wild cattle of Chillingham Park, Northumberland, may be taken as the type. 3, in addition to these may be mentioned the Polled or hornless cattle, represented by the Galloway and other breeds without horns, which may have been derived from the semi-wild stock of Chatelherault Park, Lanarkshire, Scotland. Martin observes that these three breeds "are of untraceable antiquity in our islands [Great Britain and Ireland,] so that we may call them *original*, without entering into the question as to their primæval source."

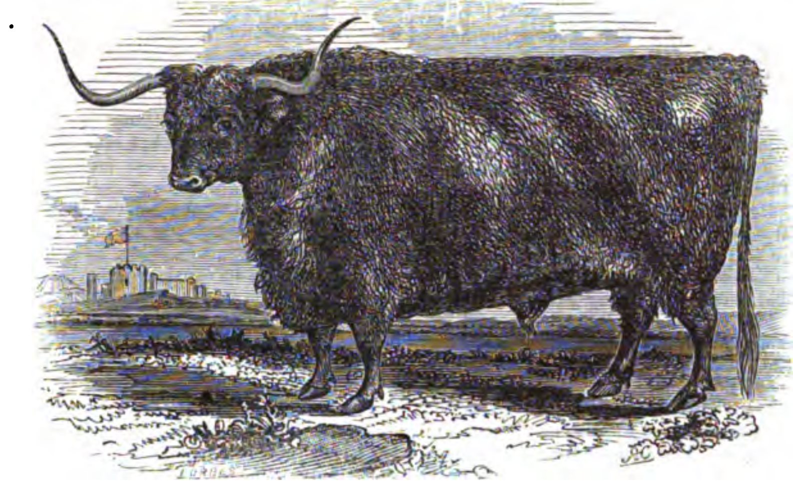
In regard to the two wild stocks mentioned, and the relation they bear to the domestic British breeds, there has been considerable speculation. Some have supposed that they were originally wild, have never been domesticated, but that the domestic breeds of which they are considered the type, have been derived from them. The conclusion, however, which has latterly been more generally adopted, is, that these cattle are descended from a domestic stock, which in early times were allowed to roam in a great degree unrestrained, and finally became emancipated from the control of man.

It is admitted that there is a great similarity between these wild stocks and some of the tame breeds. All the middle-horns, especially the Devon and West-Highland breeds, show an evident affinity with the Chillingham stock; while the Galloways are evidently closely allied to the Chatelberault cattle. The latter are larger and more robust than the Chillingham, and are mostly without horns; which, with their likeness to the Galloways in shape, gives support to the idea that they had a common origin. But we shall recur to this, in noticing the Galloways.

The middle-horns are found in Devonshire and the western counties of England, in Wales, Scotland, and parts of Ireland. They are believed to have constituted the stock of the ancient Celtic inhabitants of those districts; while the long-horns, another original stock, probably occupied the low, flat lands of both islands. As to the short-horns, we shall show, in the proper place, that they are not of British origin.

Circumstances connected with the history of Britain, have tended to preserve the middle-horned breeds of cattle in great purity. The country in early times was often subjected to the inroads of invading enemies. The property of the natives, in those days, consisted principally of their cattle; and as the encroachments of the conquerors forced them to retire to the mountain fastnesses, they naturally took with them their animals, on which their subsistence in a great degree depended. In these inaccessible regions, the people remained with their herds, in comparative security and independence. "They were proud of their country, and proud of their cattle, their choicest possession." "It thence resulted," says Youatt, "that in Devon, in Sussex, in Wales, and in Scotland, the cattle have been the same from time immemorial."

That the middle-horns have all descended from a common stock, is evident from their general characters. "The slightest observation," observes Youatt, "will convince us that the cattle in Devonshire, Sussex, Wales, and Scotland, are essentially the same. They



46—WEST-HIGHLAND OX.

are middle-horned; tolerable, but not extraordinary milkers, and remarkable for the quality rather than the quantity of their milk; active at work; and with an unequalled aptitude to fatten. They have all the characters of the same breed, changed by soil and climate and time, yet little changed by the intermeddling of man. We may almost trace the color, namely, the red of the Devon, the Sussex, and the Hereford; and even where the black alone are now found, the memory of the red prevails; it has a kind of superstitious reverence attached to it in the legends of the country; and in almost every part of Scotland, and in some of the mountains of Wales, the milk of the *red cow* is considered to be a remedy for every disease, and a preservative from every evil. Every one who has had the opportunities of comparing the Devon cattle with the wild breed of Chillingham castle, has been struck with the great resemblance in many points, notwithstanding the difference of color."

The Devon Breed.—Of this breed there are two varieties, commonly known as the North and South Devons. The former are the finest in form, and are held in the highest estimation for fattening and for labor; the latter are thought best for the dairy. The characteristics of the North Devon bull (fig. 45) may be given as follows: The head small; the muzzle fine; the nostrils wide; the horns tapering, and of a waxy yellow; the eye large and clear; the neck round and arched above, with little dewlap; the chest broad and deep; the breast prominent; the limbs fine-boned; the fore-arm muscular; the hips high, and the hind quarters well filled up; the tail long, slender, and set high.

The ox is taller and more delicately formed than the bull. He has fine withers, a slanting shoulder and prominent brisket; the legs are rather long, but fine-boned, strong and muscular; the neck is light, and rather long; the head small and the muzzle fine; the horns longer, more slender and tapering than in the bull. The whole form and appearance indicates sprightliness and activity. The skin is of moderate thickness, mellow, and in the best animals, covered with soft, curling hair. Those with straight hair are not so highly prized. Youatt says—"Good judges of these cattle speak of these curls as running like little ripples of wind on a pond of water. *** Those with curled hair are somewhat more hardy and fatten more kindly." The color is red, or bay. The best-bred families have a dun-colored ring around the eye and muzzle. When well fattened, the oxen sometimes weigh 1400 pounds or more, the four quarters. The ordinary weight at four to five years old, is from 800 to 900 pounds.

The cow is much smaller than the bull, and the bull is considerably less than the ox. She has a beautiful head, and, like the ox, a countenance denoting great intelligence. For the dairy, the Devon cow holds a moderate rank. Her milk is of remarkable richness eight quarts producing, on an average, a pound of butter, and the butter is noted for its richness and fine flavor. Some breeders have lately paid more attention to the dairy qualities in this breed, than formerly, and Mr. Bloomfield, of the county of Norfolk, England, obtained a prize a few years since, for having produced an average yield of over 200 pounds per cow, in a dairy of twenty cows.

Some of the finest North Devon cattle have been imported to this country, and there are now, in different sections, several established breeders of this stock. Among these, may be named George Patterson, of Baltimore, Lemuel Hurlbut, of Winchester, Ct., and H. N. Washbon, of Butternuts, N. Y. The Massachusetts Society for Promoting Agriculture, have imported some very fine animals of this breed, from which there have been bred others of good quality.

The breed has succeeded well here, and has proved better adapted to our hilly and unfertile sections, than larger breeds. They are hardy, generally healthy, thrifty and active. The best families are fine beef cattle, laying their flesh on the valuable parts, and giving that which is of fine grain and well marbled. It should be remarked, however, that proper attention has not always been paid by breeders to what is technically called *quality*—that is, a tendency to fatten, and to make the right kind of beef. Hard-fleshed, *lyery* animals have been allowed to propagate, and have sometimes been taken for just specimens of the breed. The reputation of the Devons has suffered, somewhat, in consequence of such false notions and bad breeding. But the error is now in a fair way to be corrected; people are beginning to have a better idea of the proper points and characteristics of cattle.

The Devons are good working cattle. The oxen are active and good travellers. For the plow, on light soils, they are unrivalled. They have long been celebrated in England for this purpose. Youatt says—"Four good Devonshire steers will do as much work in the field, or on the road, as any three horses, and in as quick and often quicker time. The only objection to the breed for the yoke, in this country, is that it is not easy to obtain oxen of sufficient size for the performance of the heaviest labor. We think this objection may be obviated in a great degree, by proper attention in breeding.

An idea has prevailed to a considerable extent, that the common cattle of New England, often called "natives," were originally North Devons. We are able to trace, comparatively, but little resemblance between them. Our "pilgrim fathers" probably introduced cattle of several breeds—though there may have been no special design of this kind. They sailed from Plymouth, a port in the south part of Devonshire. Their cattle were probably collected in the neighborhood, or as convenience favored. According to the early records of the colony, the first brought over comprised animals of various colors—red, black, and "white-backed." We have now before us an extract from an ancient document, giving an account of the division by lot, of the first cattle imported by the colonists of Plymouth, Massachusetts. The animals are not particularly described, but the colors are in several instances mentioned, and they are referred to as having been brought over in "*the Jacob*," and in "*the Ann*,"—names of vessels. "*Four black heyfers that came in the Jacob*," are spoken of as having been put into different "lots," in apportioning the stock among the people.

A person familiar with the New England cattle, especially as they were found thirty years since, when they had been little changed by modern importations—will recollect how frequently those of a brown or black color were met with; and one might almost fancy he could trace the blood of those "four black heyfers" in some of the short-legged, hardy oxen of the granite hills. The color and points of these cattle answer to the description of those of Cornwall, a county forming the south-west peninsula of England, and adjoining Devon on the west. The Cornish cattle are said to resemble those of Wales and the Highlands of Scotland.

But most of the New England cattle have been red. This has generally been the color of the larger animals. For the most part, they correspond to the characters of the South Devons, a variety differing considerably from the North Devons, being larger boned and coarser, with black noses. It is proper to remark, however, that strong indications of Sussex blood, are shown by some of the best of our "native" oxen and cows.

The West Highland Breed.—The West-Highland or *Kyloe* breed of cattle (fig. 46) is found on the western coast of Scotland, and on the Hebridian islands. The county of Argyle, and the islands of Islay and Skye, are said to furnish the best. No breed can have stronger claims to the title of *aboriginal* than this. It is thus noticed by Martin: "It may be observed that, from the most remote times, this land of heath and mountain, [Scotland,] has been the nursery of an original breed or race of black cattle, of wild aspect, of beautiful symmetry, and though small, yet vigorous and hardy; patient of hunger and cold, and rapidly fattening on tolerable land. *** If we may venture an opinion, they display more nearly than any other breed, the characters of the mountain cattle of our island, when invaded by Cæsar." Like their congeners, the Devons, they bear a close resemblance to the wild stock of Chillingham park. Martin says, "Change the color from black to white, and there is little difference between a beautiful Kyloe from Arran, Islay, or the Isle of Skye, and one of the wild cattle of Chillingham."

These cattle possess uncommon hardiness of constitution. The territory of Scotland lies mostly between 55 and 58 deg. of latitude, yet the Kyloes subsist summer and winter, on their native mountain ranges, without shelter, and generally without other food than what is afforded by the pastures of those wild regions. In winter they brouse on the heather, or crop the scanty grass, which they are often obliged to obtain beneath a covering of snow. Thus they live and thrive, where most other cattle would utterly starve. Such is their tendency to fatten, that when removed to favorable situations, they will, with good feeding, frequently gain a fourth to a third of their weight in six months. Their proportion of offal is not greater than in the most improved larger breeds; they lay their flesh and fat equally in the best parts; and when fat, the beef is fine in the grain, highly flavored, well marbled, and commands the highest price in every market. The nett weight of the grass-fed oxen, at four to five years old, is put down at 500 to 800 pounds, the four quarters—though it is not unusual for those which are well fatted, to weigh upwards of 1,000 pounds.

The points of the West-Highlanders are given by Martin as follows:—"In a well-bred Kyloe, the following characters are conspicuous: The head is small and short, with a fine and somewhat upturned muzzle; the forehead is broad; the horns wide apart at their base, tapering, and of a waxen yellow; the neck is fine at its junction with the head, arched above, and abrubtly descending to the breast, which is broad, full and very prominent; the shoulders are deep and broad, and the chine is well filled, so as to leave no depression behind them; the limbs are short and muscular, with moderate bone; the back is straight and broad; the ribs boldly arched and brought well up to the hips; the chest deep and voluminous; the tail high set and largely tufted at the tip; the coat of hair thick and black: such is the bull. The ox differs in proportion. The cow is far more slightly built, and her general contour is more elongated. Although, as we have said, black is the ordinary or standard color of the kyloe, many are of a reddish brown, and some are of a pale or whitish dun."

The milk of the West-Highlanders, though not afforded in great abundance, is of extraordinary richness, and the butter made from it is highly esteemed for its superior flavor. There is good reason to believe that the oxen would prove equal to any breed for labor. Sir John Sinclair states that he tried various breeds for this purpose, and that from Argyle he "got as quick, honest and hardy workers, and profitable fatteners as could reasonably be desired." Their form is indicative of great strength and energy.

We have on former occasions, suggested the advantage which would result to many sections of this country from the introduction of the West-Highland cattle. It seems to us that these and the Galloways, would be better adapted to our northern districts, and mountain ranges, than any other breeds.

The figure herewith given, is that of a West-Highland ox, five years old, exhibited by His Royal Highness Prince Albert, at the Smithfield Show of fat cattle, 1847, and which received the first prize in the class of extra stock.

Weekly Agricultural Meetings at Boston.—These meetings are held at the State House every Tuesday evening during the session of the Legislature. The organization for the present year is as follows: Hon. M. P. Wilder, President; Lieut. Gov. Reed, Hon. Cornwell Leonard, Vice-Presidents; Wm. Buckminster, S. W. Cole, Levi Bartlett, Secretaries. This, we believe, is the tenth winter during which these meetings have been held, and it is stated that more interest has been manifested in them during the present sesssion than ever before. We shall probably give some account of its disscussions hereafter.

The Farmer's Note-Book.

The Manufacture of Maple Sugar.

EDS. CULTIVATOR—As maple sugar is becoming an important article in the product of our farms, it is important that every farmer, having a sugar-orchard, should know how to make such sugar as will command the highest price in the market, and also be the best to use at home.

Some of the sugar, made for exhibition at our fairs, though very *white* and *nice* to look at, is not very *sweet;* it has been not only drained, but bleached, by having water passed through it—a process which takes out not only the sweetness, but a large share of that peculiar *maple flavor*, which constitutes its excellence. If sugar is black and dirty, it may be improved by draining, but if rightly made, there will be no dirt in it, and very little color, so that it will need no draining.

To make good sugar, the manufacturer must take for his motto—*cleanliness*—and stick to it from first to last. The buckets, store tubs, and every thing the sap or sirup passes through, should be perfectly *clean* and *sweet*, so that the sap or sirup, when put into the pans for boiling, may be as clean as milk for the cheese-tub, or cream for the churn.

In tapping trees a ¼ or ⅜ inch bit is preferable to a larger one; a small wound being much the least injurious to the tree. Nails for hanging up buckets, are generally made much too large and too long. The best that I have used, are made of wire, of suitable size, cut off about 1¼ inch long, then drawn out a little at one end, and headed at the other. The sap is most easily carried to the sugar-house in spouts, where the sugar-orchard is so situated that it can be done; but when a team is used, the sap is gathered most conveniently, in tubs made largest at the bottom, the upper head being three or four inches from the end of the staves, and having a hole sawed in it, large enough to admit a pail for pouring in the sap; over this should be fastened a cloth strainer, to separate the leaves and pieces of bark that may have blown into the sap.

Sheet-iron pans are generally used for boiling, and where the saving of fuel is an object, two may be heated by the same fire—a large one in front, and a smaller one between that and the chimney. The old method of boiling in kettles, as still practiced by some farmers, is hard business; requiring much more time and fuel, besides making sugar of an inferior quality.

When the sap is boiled to a sirup, it should be strained through a woolen strainer, and left to settle one or two days. It should then be poured back into the pan, (leaving the settlings, if any there are) and sugared off. If the sap has been kept clear and free from rainwater, the sirup will be as clear as honey, and will need no cleansing; but if by any means, the sirup has got much dirt or color in it, it should be cleansed. If after cleansing there remains any of the curd or other impurities, the sirup should again be strained through a flannel strainer, always giving it time to run through without squeezing, but as there is considerable work in cleansing, besides a shrinkage in the sirup, it will be found much cheaper to *keep the dirt out* than to *cleanse* it out. The nicest sugar I have ever seen, was boiled in bright tin pans, from the sap directly to sugar.

As sugar sells best in small cakes, of from 2 to 8 oz. weight, it should be run in moulds of this size. Moulds of tin and wood are used, but wood is much the cheapest and most convenient. They are easily made by nailing strips of wood, at equal distances, upon a board made perfectly smooth and level—the strips to be a little the thickest at the bottom, that the sugar may easily be taken out. Cross strips are put in, by sawing spaces in the ones already nailed down, which last strips will of course need no fastening, being taken out with the sugar. The cakes may be of any size, according to the thickness of the strips and their distance from each other. When the sugar is done, the pan is taken off and the sugar stirred until it begins to grain—then dipped upon the moulds, and the top levelled by passing over it a straight piece of board, as fast as the sugar is poured on. Nice sugar, made in this manner, will always sell well, without reference to the price of common sugars, being sold as an article of luxury.

For home consumption, many think stirred sugar altogether the best, and most convenient. To make this the sugar is done about the same as to cake, then taken out and stirred rapidly till dry—afterward occasionally stirring it to keep it light. Though stirred sugar may not be quite so white as that not done as much and then drained, yet, when the trouble of draining, the loss of sweetness and flavor is considered, we think the stirred sugar altogether preferable to use in cooking.

It is a common, but mistaken opinion, that good sugar cannot be made the last of the season. Two years ago, when the sugaring was about over, and the buckets sour, I brought them to the sugar-house and scalded them over, after which there was a run of sap, which was made into stirred sugar, which drew a premium at our next fair. As I took no extra pains, it was not so white and nice as some lots of drained sugar, which were equal in appearance to the best double-refined loaf; yet, it was so nearly white, that those unacquainted with the manufacture of maple sugar, could hardly be convinced it was not drained. Though the last runs may not generally make so good sugar as the first, yet there can be no doubt *sour buckets* are more at fault than the lateness of the season, or the swelling of the buds.

Those who make maple sugar, know there is *hard work* in it, and though there may be *extra* labor in making *nice sugar*, yet when we consider that one pound of first-rate sugar, is worth more than two of the black stuff that sometimes passes, or is offered for sugar, it is easy to see, that those who make the best article, receive the best reward for their labor. JOHN TUFTS
Wardsboro,' Windham Co., Vt., March, 1849.

National Meteorological Observations.

EDS. CULTIVATOR—We have noticed with much pleasure, a circular issued by Profs. Henry, of the Smithsonian Institute, and Espy, of the navy, on the subject of observations on the meteorology of our country, especially with reference to American storms.

The movement is one which we may well suppose in the present age will not receive universal approbation. Yet, although many may decry and say it is of no importance, a mere throwing away of money, we conceive the project to be one of vast importance to advancement in science, and of a practical utility which can be appreciated only when much better understood, than it is at present.

There is probably no class that will receive greater benefit from these observations, if they are carefully noted, than the farmer, for who is affected by storms and frosts, and wind and change of temperature more than him? The tendency of meteorological observations, is to note these changes with atmospheric appearances preceding them, which, if his own observation would do, would undoubtedly enable him to avoid many an unforeseen catastrophe. They will also establish climatical differences more clearly than they have yet been done, and in this way render him much service.

We hope for the glory of the nation and the well being of all its subjects, this noble enterprise will be faithfully carried out, and am sure that every "native American," faithful and true to the interest of his country, will rejoice to see Congress make such appropriations as are necessary to consummate the object. W. Bacon. *Richmond, Mass., March,* 1849.

Manger Feeding.

Eds. Cultivator—That the common method of feeding horses by putting coarse hay in a rack before them, and giving them oats unmixed with other food, is not the best way, I am fully convinced. When hay is fed from a rack, there is usually much waste, as horses are apt to acquire a habit of selecting the best locks, and drawing the remainder down to be trodden on and mixed with their litter. When oats are fed in the common way, the horse swallows them so greedily that they are not half masticated, and consequently, a pretty large portion of them do not digest. Now both of these difficulties may be obviated, and a considerable saving effected by adopting a different management.

I will describe my method, and all who are pleased with it may do likewise. I prepared my manger for containing a quantity of cut feed sufficient to last a horse 12 hours, by making it 20 inches deep, and 18 inches wide at the top—each horse's portion being as long as the width of his stall. Narrow strips of board are firmly nailed across the top, 14 inches apart, to prevent the horse from tossing his feed out. I have a self-feeding machine for cutting hay and straw, with which one man can cut as much in half an hour, as three horses can consume in 24 hours. Each revolution of the wheel to which the knife is attached brings the straw or hay forward one inch, so that the whole is cut in pieces an inch in length. I feed oat straw and hay, in equal proportions, and keep the manger well supplied. Twice a day, (morning and evening) each horse is allowed three quarts of oats, put in his manger dry, and well mixed with his cut feed; I prefer mixing the oats with the other feed dry, because if wet some of it will become sour and unpalatable. Now the advantage of thus mixing the oats with the cut feed is obvious; for the horse cannot swallow the latter without first chewing it, and as he cannot separate the oats from it, he is obliged to chew them also, and consequently they all digest, and the whole of their nutriment is extracted.

Horses thus kept, and moderately worked, will be healthy, spirited and in good condition; old horses will do better on cut than on coarse feed, because less chewing is required; there is also an advantage gained by cutting the provender for horses that are kept much of the time in harness, as they will fill themselves quicker than with coarse feed, and therefore have much more time for rest. The only objections I am aware of to this system, are the cost of the machine and the labor of cutting; stlll I am well convinced that the saving of feed is more than an equivalent for these. Some may be disposed to take advantage of this plan to induce horses to eat musty hay, or such as has been spoiled in curing; but every farmer ought to be aware that such hay is always injurious, and is very liable to produce an inflammation of the kidneys.

Many farmers in this neighborhood have the impression that rye straw contains more nourishment than oat straw. I know not the origin of this opinion; perhaps the inference is drawn from the fact that a certain quantity of rye is of more value than the same quantity of oats by measure. But horses and cattle always give the preference to oat straw; (and their judgment in this case, is of some consequence;) besides, the analysis of the two, shows that oat straw contains considerable more of the principal nutritive ingredient (nitrogen) than is contained in rye straw. It should however, be borne in mind, that any kind of straw is vastly inferior to hay in nutritive properties, and I would only recommend the use of the former for horses for the sake of economy, and when little labor is required.

Some prefer ground feed for graining; but if they will take the trouble to weigh their grists before sending them to mill, and again after their return, they will find the toll is an item worth considering. I doubt whether there is any kind of feed in which so many valuable properties are combined as in oats, and I would always give them the preference, except when their price in market is much higher, proportionally, than the other kinds of grain which may be substituted for feeding, as rye and corn. I can see little advantage, and no economy, in having oats ground, when we can feed them in such a way as to ensure thorough mastication. J. McKinstry. *Greenport, Columbia Co., N. Y. February,* 5, 1849.

Digging Gold at Home and Abroad.

There is danger that the drain to the gold regions will leave the country very bare of laboring hands. Many, very many, have gone to the *diggings* of California, as hired hands, or on shares out of their own work, who at home, "to dig were ashamed." Mere drones and loafers will not be missed; but clerks and young mechanics in the towns and cities have gone, whose places must be filled by others. Farmers' sons, in many instances, have gone, leaving the homesteads to be cultivated or not, as their fathers may find help. This state of things calls upon those who are left to be up and doing;—to lay their plans judiciously;—to use such labor-saving machinery as they find applicable. Let no one take more ground under cultivation than he can manage well and in good season. Let the manure be all well applied. It may be, that a fair application of mind and hands and means at home, may bring a harvest as profitable, all things considered, as the generality of gold seekers will reap. It will be attained with infinitely less anxiety and danger, in all cases; and be followed, in most cases, with less regret. D. M. *Allegany Co., Pa.*

Transplanting Forest Trees.

As the season of the year for the transplanting of forest trees is near at hand, the following remarks may be useful. They were written by Mr. Amos Hitchcock, of Pittsford, Vt., who obtained a premium from the Rutland County Ag. Society, for his success in transplanting forest trees. He describes his practice as follows: "About the first of May, or when the buds are considerably swollen, and spring so far advanced as not to freeze nights, we repair to second growth timber land, if we wish for maple or other forest trees. Provided with the necessary tools, we select our trees, avoiding crooked or ugly formed trunks, and commence the operation by digging a trench around the tree, eighteen or twenty inches from the tree, according to its size, and sufficiently deep to cut off all the large roots. The tree is then easily removed by the help of an iron bar, and a little hand lifting. Care is taken not to injure the small fibrous roots. After having dug in this manner, as many trees as we wish, they are conveyed on a box wagon to the place where they are to be planted. We now bring the trees to an equal length by removing all the top, say ten feet from the root. If there be small shoots below this point they are suffered to remain, otherwise the entire top is removed. The holes for receiving the trees having been dug at equal distances, and in a direct line, the roots are then wet that the earth may readily adhere to them, and the trees are planted to their original depth. Care should be taken to work the fine earth in among the roots, so that no vacuum be left directly under the trunk. The turf should be placed snugly around the tree with the grass side up, and the whole pressed down with the foot or some suitable instrument. In this way, two men will carry to the distance of one or two miles, and plant from twenty-five to thirty forest trees per day."

The committee who awarded Mr. H. the premium, add the following to his statement: "In transplanting trees, though great care be exercised, there will be a severe loss of roots, and the tops should be reduced in proportion to this loss. Where stones can be procured, it is well to place a number of good size over the roots at a little distance from the trunk. They tend to prevent the roots from working in the ground, and also to keep the ground moist about the trees."

Good Crops in Indiana.

Eds. Cultivator—**Ira Hopkins** having stated in the November number of the Cultivator, (1848,) how thirty bushels of wheat could be raised to the acre, I have concluded to tell you how I raised one hundred bushels on three acres, and eighty-four bushels on three acres and eighty-nine rods, the past season, on land that produced but thirteen bushels to the acre in 1839, which was one of the best wheat seasons in this neighborhood, we had been favored with for the last ten years.

In the spring of 1847, I plowed three acres of clover and timothy sod, as deep as possible. On the 16th April, harrowed, cross plowed, harrowed again, made drills about two feet eight inches asunder, manured the drills liberally, dropped potatoe sets in the drills, about nine inches apart, covered by running the plow both ways in each drill. Some days after, pulled a little off the top of each drill with a hoe. When the plants were 8 or 10 inches high, plowed the soil from each side of the drills, run a cultivator between to level and pulverise; run the plow both ways, and threw back the soil to the plants.

On the 14th September, commenced raising the potatoes with the plow, by taking eight or ten drills at a time, and plowing round them, the first furrow turned one side off the two outside drills, the next threw out the middle, the next turned over the other side, the next furrow turned up the space between the drills; thus plowing all the ground thoroughly, and so deep as to turn up a little of the subsoil. Used hoes after the plow, and when all was plowed, harrowed both ways. Then plowed the ground as deep as possible into lands, 2 rods wide. Sowed one rod at a round, and on the 30th of September, sowed one and a-half bushels of Mediterranean wheat to the acre.

We may let the wheat grow till I tell you of the produce of the potato crop; but I cannot tell you this exactly, though I can tell enough to show that a medium potato crop produces more value than a good corn or wheat crop. I sold 350 bushels at 25 to 30 cents per bushel—$92.07. Kept 101 bushels of the middle-sized for seed. Gave the small ones to the cows, and supplied a family of thirteen persons eleven months, besides a man half of the time, and four or five hands a month in harvest. I may say that potatoes, last season, did not produce half as much, as they took the rot during a very wet time in August. When the weather changed the rot ceased, and none have rotted in the cellar. This is the first appearance of the potato disease I have seen, except the two previous years, the end attached to the stem, rotted in a few instances.

In April the wheat appeared too rank, and I turned 100 sheep on it for a few days; still some spots lodged. On the 20th June, reaped it—stacked it when cured. On the 6th September got it thrashed by a machine, and had 101 bushels, weighing nearly 63 pounds per bushel. Sold part at 72 cents per bushel.

You will observe the number of plowings this piece of ground got. From conversing with an Englishman and reading the Commissioner of Patents' Report for 1847, I find that the English and Germans, generally plow the ground twice at least, before sowing wheat.

The three acres eighty-nine rods, was clover and timothy sod also, and was manured in the winter of 1845 and 1846, with 80 two-horse wagon-loads of barn-yard manure, plowed deep and harrowed, and planted in corn. The cultivator was run four times through the corn, but the plow never. I think it produced 60 bushels to the acre. I did not measure it, but I measured another field the same season. The spring of 1847, sowed it with barley, and it produced only seventeen bushels to the acre, and never got more than this of spring barley to the acre. After harvest, I scraped up all the manure I could get, and scattered it over the stubble, plowed it down, and on the 11th September sowed six bushels of what is called red-chaff wheat, on the furrow, and harrowed it both ways. Reaped on the 22nd June, got it thrashed by a machine, on the 6th September, and had 84 bushels bright plump wheat, rather over 63 lbs. per bushel.

I delayed forwarding this, till I had got out some barley, the produce of three acres and 157 rods, on which I sowed 11 bushels, or 2¾ bushels to the acre, which is half a bushel more than I ever sowed before. It was highly manured in the spring of 1847, and planted in corn and pumpkins, and brought about 60 bushels corn to the acre, and an immense quantity of pumpkins. The produce is 70 struck bushels, weighing rather less than 48 lbs. per bushel, which is the legal weight of barley in Indiana. In 1847, I sowed eight bushels on three acres eighty-nine rods, or about 2¼ bushels to the acre, and had 61½ bushels, weighing 49 pounds per bushel—each producing about 17 or 18 bushels per acre. In 1846, I sowed 11 bushels on 5½ acres or two bushels to the acre, and had but 77 bushels, or 14 bushels per acre. Part of this land was rather flat and wet, and I suppose all my land is too heavy for barley —it bakes very hard after rain. John J. Craig.
Madison, Indiana, January 16, 1849.

Breaking Rocks by Fire.

Eds. Cultivator—While perusing the February No. of *The Cultivator*, I observed a statement from one of your correspondents in regard to the manner in which he cleared his land of stones. His mode was to excavate a large hole upon one side of the boulder, and partially under the rock which he wished to remove, and then roll it in. I think the process might well be replaced by one which is much more economical. Your correspondent observes that it is very hard to drill some "hard-head" rocks; an assertion which I truly confirm, having been engaged in the business myself, for weeks in succession, upon my father's farm, in Lewis Co., N. Y.

In 1843, we were clearing a piece of ground of stone by the aid of the drill and powder; one very cold day a fire was built upon a rock, which was, perhaps, 4 feet in diameter, near the wall where we are at work. By means of the heat there were large scales loosened on the top of the rock, which were taken off with a crowbar, and used for filling up the centre of the wall.

Subsequent to this, a fire was built upon the same rock, and sometime after, the scales being removed, it was ascertained that the rock was broken through in two different directions, dividing it into four nearly equal parts.

The quarters being left with face sides, fitted them admirably for laying into wall. From this time henceforth, the drill was dispensed with. Experiment showed that one man could carry a sufficient quantity of wood to break any rock, which a farmer might be desirous of removing from his fields. Another great advantage was, that wood of little value, such as old pieces of rails, stumps, and the like might be used with advantage and economy.

There is one point which must not be neglected, if success is expected; that is, to keep the rock clear of shells while heating. To do this with facility, the tools required are a sharp iron crow-bar and a pair of large tongs. As soon as any shells are found to have started up, the fire should be removed with the tongs, and the scales carefully taken off with the bar. This is the only secret in the process. The object is, that the heat may be applied directly to the solid rock. The fire should then be replaced with the tongs, and so on until the stone is broken. Throwing on cold water is superfluous.

One man can attend twenty of the fires, or one man can perform as much work in this as ten will with drills. The beauty of the process is, that it is performed comparatively without danger or expense. DENNIS JOHNSON. *Mount Airy Agricultural Institute, Pa., February*, 1849.

We have seen rocks broken by the process above described, and we endorse what our correspondent says in regard to it.—EDS.

Good Hogs.

EDS. CULTIVATOR—As you sometimes notice the weight of hogs in your paper, I am induced to send you the weight of two or three lots, slaughtered this season in my neighborhood—not because they will favorably compare with certain individual *pet porkers*, whose weights I have seen published—but because they were kept in the usual way—put up at the usual time, and fed from six to eight weeks only.

The first was a lot of four, twenty months old, butchered by Mr. David Connor, averaging 397 lbs. The second, a lot of fourteen, butchered by R. S. Wright, Esq. The largest weighed 568; the four largest averaged 472; the twelve largest averaged 405, and the whole lot averaged 397 lbs. The third, a lot of seven, butchered by Mr. A. J. Brest, averaging upwards of 300 lbs.; two of them, fifteen months old, averaged 334 lbs.

Several years ago, the Chester and Berkshire stock were introduced into this section of country, and have no doubt improved our breed; but few of the pure blood are now found. S. B. T. CALDWELL. *Wheatland, Va.. January* 16, 1849.

Register of the Weather.

Rev. D. C. SAUNDERS, of Medfield, Mass., has furnished the *Mass. Ploughman* with some remarks on the weather, based on a register kept by him from the year 1821 to 1848, inclusive. The observations were made during this period, three times a day—at sunrise, and in the afternoon at two and nine o'clock. The average annual temperature for the whole time, is 46 degrees, 52-100, Fahrenheit. But it is said "a writer on this subject would approximate nearly to the truth, were he to state the annual temperature of this part of the country at 50 degrees, as this thermometer was stationed on the North side of the house, in a very bleak place, where the sun never reached, and in the hot season, was always shaded by the thick foliage of tall trees and dense shrubbery."

It appears that the former 14 years—from 1821 to 1835—were about 1° warmer than from 1835 to 1849; upon which the writer observes—"This fact opposes the general opinion, that the temperature of the country is higher than it was in former years. Every *aged* person knows that the winters now are not nearly so severe as they were in the days of his youth. A thaw, in the winter, was never known in Vermont until about the year 1793, though since it has happened every season. Persons old enough to remember the cold winter here of 1780, when snow came high enough to cover up from sight all the walls and fences; when the crust of the snow was so firm as to bear up a traveller on foot any where; when the sun was not able to melt a flake of snow; and such extreme severity continued for more than six weeks, will not find it difficult to believe that the seasons have become much more mild. But if this climate has not become warmer, its temperature is certainly more *equalized* throughout the *whole* year. We have no such cold winters and deep snows as we used to have. Now, we have no Spring and frequent showers, as we had formerly. But we have a compensation in lovely Autumn. September has become a delightful month, far more so than half a century ago. October, if not November, is about as mild and sunny as September was in earlier times. Winter used to come rough, violent, and lasting, by the 10th November; now it often spares mildly to mortals the 'merry' days of Christmas."

The average temperature of each month, for the twenty-eight years, is given in the following table:

January,	25.12	July,	69.41
February,	25.48	August,	67.70
March,	33.66	September,	59.72
April,	43.94	October,	48.60
May,	53.15	November,	37.87
June,	63.81	December,	28.78

This shows that January is the coldest and July the hottest.

The number of *fair* days per annum has been 211; *cloudy* days, 154; *rainy* days, 57; average depth of snow, 30 inches. "The *warmest* year was in 1828, at an annual temperature of 49 8-100 degrees; and the *coldest* year was in 1836, when the annual temperature was 43 63-100 degrees. This shows a *difference* between the coldest and hottest years, of 5 45-100 degrees. But, in general, the difference of temperature between whole years, is quite inconsiderable, or very nearly the same."

Seasonable Hints.

As early in April as practicable, it will be proper to sow oats, barley, spring rye and spring wheat—excepting, in reference to the latter, those sections where the crop is liable to injury from the wheat midge. It has been found that this insect appears at a particular period, and that it only attacks wheat which is in a particular stage—or at least, it is only such wheat that is injured by it. If the crop is too far advanced it escapes, and so it does if it has not reached the stage necessary for the fly to deposit its eggs. The eggs are deposited at the time, or shortly after the wheat is in bloom. Hence, early-sowed winter wheat and late-sowed spring wheat, is least likely to be affected by the midge. But to counterbalance this advantage in regard to late-sown wheat, it is more subject to rust, and is less likely to fill well, generally, than that which is sown earlier. So that the farmer must choose between the different enemies by which he is likely to be assailed—that is, he must determine from which his crops are liable to be most injured, and direct his operations accordingly.

The Black-sea wheat has been found to succeed better under late sowing, than most other kinds. In Maine, Vermont, and the northern part of New-York, it has been sown the latter part of May and sometimes as late as June, and given good crops.

The usual quantity of seed, for spring wheat, is two bushels per acre. If the ground has been thoroughly stirred the previous year, it will not be necessary to plow very deep, though the soil should be well pulverized.

Of oats, it has formerly been the practice to sow only about two bushels per acre, and in some instances less; but so far as we are informed, all the large crops of this grain, have been obtained by sowing from three to four bushels per acre. It is not very uncommon, of late years, for from eighty to a hundred bushels of oats to be raised on an acre, but we have never heard of any such yield, when less than three bushels of seed was used.

Of barley, it is usual to sow about four bushels of seed per acre. The best soil for this crop is a warm loam. We have been informed that a fly similar to the wheat midge, commonly called the barley midge, has latterly attacked the barley crops in the western part of this State. Not having had an opportunity to examine the insect, we cannot speak in regard to the proper mode of preventing its ravages.

It is common to lay down lands to grass in connexion with most spring grains. If the object is hay, and the soil is of a medium character as to dryness, we would recommend the use of the following mixture for one acre:

Red clover, (*Trifolium medium*,) 8 lbs. or 4 qts.
Timothy, (*Phleum pratense*,) 8 qts.
Red-top, (*Agrostis vulgaris*,) 1 bushel.

If the object is pasturage, we should use the following:

Medium clover, 2 qts.
White do 2 qts.

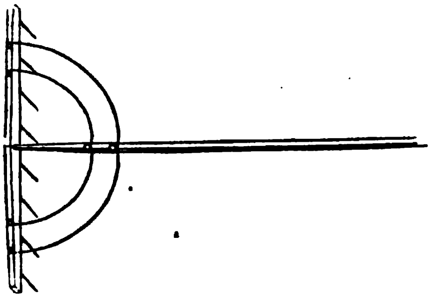
(If white clover comes up in the soil without sowing, it may be omitted.)

Kentucky blue-grass, (*Poa pratense*,) 8 qts.
Timothy, 4 qts.
Orchard grass, (*Dactylis glomerata*,) 1 bushel.
Red-top, ½ bushel.

On wettish soils, the red clover may be omitted. The orchard grass requires a very large quantity of seed, on account of its light and chaffy nature. The different kinds of seed may be mixed together, by slightly wetting them, and may be readily sown by mixing ashes or plaster to prevent their sticking together. It is best to sow them after the grain has been harrowed in, and they will be sufficiently buried by a brush harrow, or a very light iron-tooth harrow.

Improvement in the Rake.

Eds. Cultivator—Being a mechanic as well as farmer, I would take the liberty of suggesting a small improvement in the manufacture of the hand-rake. Instead of the wooden bow, take wire of a suitable size, cut it off the right length, and bend it round so as to form a loop at each end, and in the middle, as represented in the annexed drawing; flatten them down a little, and after the handle is made fast in the head lay on the curved wire and insert wood screws through the loops into the handle and head. Rakes are more expeditiously made in this way than any other; they are cheaper, more durable, and much easier repaired. Jason Smith. *Tyre, N. Y., Feb.* 24, 1849.

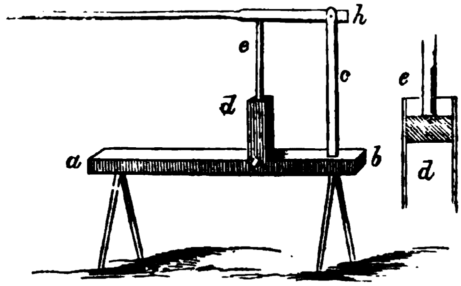


45—IMPROVED RAKE.

Sausage Stuffer.

Eds. Cultivator—The following is intended to represent a sausage stuffer, which is in very common use in this section of country, and I think would be a proper accompaniment to the sausage cutter mentioned in the January number of *The Cultivator*, page 26. I think it preferable, in some respects, to the one mentioned in the December No., 1846, as almost any person can make one for his own use.

A. B. is a piece of scantling, about 4 inches square and 3½ ft. long, with four legs, about 18 inches high, something like a carpenter's trestle; C. is an upright piece, about 2½ inches square, and 18 inches long, mortised into A. B. tight, about 6 inches from the end; D. a small box, about 10 inches from C., 9 inches high above A. B., and fastened to the same, and four inches square inside the box, in which the sausage-meat is to be put. There is a small tin spout on the side, near the bottom, through which the meat passes into the skins. E. about 2½ inches square, 14 inches long, mortised into a block 4 inches square, with a moveable joint, the block to fit pretty tight in the box D; and F. H. a lever, 5½ feet long, 2½ inches square at one end, and round at the other; which is used as a handle to work up and down the block on the end of E. which fits in the box D. A Subscriber. *Loudon Co., Va., Feb.* 12, 1849.



46—SAUSAGE STUFFER.

Benefits of Wool Depots.

Eds. Cultivator—In conversation with gentlemen from different parts of the state during the winter, I find that the facilities for selling wool are far greater with us, than in many other sections, and that the depot system is imperfectly understood and appreciated by many. In view of these facts, I thought it might not be amiss to suggest some thoughts for the information of those who are unacquainted with the operation of that system; believing as I do, that if they understood the advantages to be derived from it, all who have to depend on the agents of manufacturers, or the speculator, for purchasers, would patronize the depot.

The greatest objection I find to this course, is a want of confidence in the responsibility of the agents. Three depots only have as yet been established, and I can speak of only one of the agents, as I am unacquainted with the others.

With Mr. Blanchard, the agent at Kinderhook, I am well acquainted, and know him to be well qualified in all respects to conduct such an establishment, and that his experience for several years past has added greatly to those qualifications; that he is a man of sterling integrity, that he has given general satisfaction, and enjoys the confidence of all who have patronized his establishment; and I recommend him to all who approve of the depot system, as every way worthy of their patronage.

The depot system is conducted upon the well known principles of all other commission business, and facilitates the sale of wool by collecting large quantities of the various grades at one place; thereby enabling the manufacturer to purchase the grades adapted to the style of goods he makes; inducing many to visit the depot for that purpose, and creating competition advantageous to the seller. But a greater advantage arises from the fact that the agent understands, and can judge of the value of the article with as much certainty as the farmer can judge of the value of a bushel of wheat, or a pound of pork; for with those articles, the farmer has a basis on which to found his estimate of their value,—the prices of flour and pork per barrel being a reliable standard; so with beef and all kinds of grain; the difference in the quality of these articles being so small, and the standards of weight and measure so well understood, that he can arrive at their value with great certainty.

Not so with the article of wool; that has many different grades, each bearing a different price, varying from twenty to sixty cents or more per pound, and any of the well selected flocks have qualities differing in value from twenty to twenty-five cents per pound.

These different qualities cannot be known with any degree of certainty to the grower, because it requires much practice in handling and assorting for the manufacturer, to make a man a competent judge of the different sorts contained in any flock; hence, from the nature of the farmer's pursuit, the impossibility of his knowing the difference; hence also the importance of a depot for wool, where it may be assorted by skilful hands, making the value of each sort available to the grower.

To fix a price for wool, there must be a reliable basis on which to found that price; with that also, the grower is as much in the dark as in determining the different qualities of his wool; but with this the agent is as familiar as with the different grades he handles, basing that knowledge on the prices of cloths in market, and knowing the grades of wool of which the various qualities are made, and the price of manufacturing each quality, he has no more difficulty in determining the value of the different sorts than the farmer has in determining the price of a bushel of wheat, by the value of a barrel of flour; and from the knowledge he has of the cloth and wool markets, and the quantities of each in the different markets in the country, he is better able to judge of the fluctuations of trade, and to calculate with more certainty the probable rise or fall in the market.

Assorting wool, and selling to the manufacturer, at the different prices he is willing to pay for those sorts, is what the speculator, as a general rule, relies upon for his profits,—paying the grower, as he usually does, for well bred flocks, about what the low grades are worth.

It is well understood by persons conversant with such matters, that the manufacturer is willing to pay more according to its value, for the grades he works, than he will for promiscuous lots of different grades, and that the manufacturer of fine wool, places a higher value on such wool, than the manufacturer of coarse wool; so also with the manufacturer of coarse wool, he places a higher value on the kind he works, than the manufacturer of fine wools.

Having wool assorted by competent judges, enables each man to determine whether his flock is above or below the standard of his neighbor, and whether he is pursuing the most judicious course in point of economy in keeping the kind of sheep he does.

The depot system gives an opportunity for interchange of views among wool growers, meeting at the depot, and communicating such information as they may have derived from experience; and enables them to form correct opinions of the different breeds of sheep, and what improvements are made in breeding; as the character of each flock is ascertained from the books of the depot agent in such a way as to put at rest all dispute.

The number of fleeces are there registered, the different qualities ascertained, the weight of each, and the dollars and cents they produce; securing to the grower much valuable information and many facilities for the successful prosecution of his business;—enabling him to form correct views, draw correct inferences, and make them available to his interest, and gratifying to his desire for improvement. DANIEL S. CURTIS. *Canaan Centre, N. Y., March* 10, 1849.

The Spring Season.

EDS. CULTIVATOR—The spring is a most important season to the farmer. In all cold climates, where the warm and growing season is short, much depends upon getting our summer crops in, in good season, and in good order. The land should be well tilled, and the surface well pulverised, so as to give the roots of the young plants a healthful and vigorous growth in the early part of the season. This enables them to stand either too much wet, or too much dry weather, and the attacks of worms much better than if got in late in the season, or in bad order. The straw of grain sown early, is not as subject to rust or lodge, as that sown late; and grain which is forward, and ripens early, is usually much better and heavier than that which is late. The farmer who gets his crops in well and in good season, is most sure of a good yield; besides, if he gets his spring's work done early, he will be most likely to do the whole work of the season in good time, and will have time to do it well; while, if he gets behind time in the spring, he will be most likely to get behind time through the whole season; and being drove with his work, will not be likely to do it well; and if he keeps an account of outgoes and incomes, will be most likely to find his profits much less than they would have been, had his spring's work been done in season.

The spring is also important in another point of view. Almost all of our domestic animals drop their young at this season; and the same rule that applies to the vegetable, applies with equal force to the animal kingdom, viz: that we pay particular attention to them while young, so as to give them a healthful and vigorous growth in the start. All experience has shown that if we would rear good stock, we must give them good keeping while young. In cold climates, all animals intended to be reared, should be dropped as early as the climate and season will admit. This enables them, with good keeping, to become so large and hardy, as to stand the first winter well; while if dropped late in the season, and poorly attended to, their small size,—slender and feeble constitution, illy fits them to stand our severe winters. The first of March is the best time for calves. This enables them to make good use of the early grasses as soon as they start, and gives them the benefit of the whole season of pasturage. And further, the dams of all young animals, require particular attention and good keeping at this season, or they will run down and become poor. Dairy cows especially, should have the best of care, if we expect a good yield from them during the season. The milk drawn from the cow is a monstrous draft, and if she is suffered to get poor in the spring, she will remain so during the season, and the yield of milk will be small, particularly during the latter part of the season.

There are many other important matters to be looked to during the spring. Do your old meadows need harrowing and manuring, and additional grass seed? If so, now is the time to attend to it.

Have you a sufficient number of fruit trees, and of the different kinds best suited to your soil and climate? If not, this is the time to plant them.

Have you a sufficiency of shade trees and shrubbery to make your situation pleasant? If not, now is the time to plant them. It will cost you but little labor. Plant them, keep cattle from them, and natural agents will do the rest.

Although we would not encourage extravagance of style in our common farmers, still we can see no good reason why they should not practice and encourage correct taste, as well as those engaged in other pursuits. It is believed that those farmers who are the most particular in all their operations, are the most prosperous, provided they avoid what may, (as applied to farmers) be justly termed extravagance.

The time when a particular job is done, may not be of much importance to the manufacturer or mechanic, but to the farmer it is all important that he does almost every thing at the right time. He has to depend upon natural agents for success; and they will not come to his aid, unless he accommodates them as to time. Nature does not alter her laws or rules, to suit either the ignorance, misjudgment or slackness of the farmer. If he plants his corn too late in the spring, she will not stay the frost in the fall to give it time to ripen. If then, we would be benefited by natural agents we must so observe their laws as that they come most readily to our aid; and there is no season of the year when this observance is more important than in the spring. Farmer. *Columbia, Feb.* 24, 1849.

Notices of Publications.

THE AMERICAN FARM BOOK; or Compend of American Agriculture; being a Practical Treatise on Soils, Manures, Draining, Irrigation, Grain, Roots, Fruits, Cotton, Tobacco, Sugar-Cane, Rice, and every Staple Product of the United States, with the best methods of Planting, Cultivation, and Preparation for Market: By R. L. Allen. New-York, C. M. Saxton.

"The American Farm Book" is a handsome dollar volume, by one of our most correct agricultural writers, systematically arranged, and embracing those subjects of most general interest to the practical farmer, treated in a plain and popular manner. It is a reproduction of the "Brief Compend of American Agriculture," published by the same author about two years since, and which met with so rapid a sale, as to induce a new and enlarged edition, under the more appropriate title now chosen; and we are glad to hear that this is intended as one of the first in a "Series of lessons for the American Farmer," to be issued by Mr. Allen; who, from his good judgment, familiar acquaintance with rural affairs, and ability as a writer, is peculiarly qualified for such a work The volume before us will be found useful to the farmer of the north and the planter of the south, treating as it does of the staple products of every section of our country. It is illustrated by about 100 engravings, and is got up in a style, creditable to the enterprising publisher.

THE ARCHITECT; a series of Original Designs for Domestic and Ornamental Cottages, connected with Landscape Gardening, adapted to the United States; illustrated by Drawings of Ground Plots. Plans, Perspective Views, Elevations, Sections and Details By W. H. Ranlett. New York.

We have on several previous occasions noticed this excellent work. It continues to be published as heretofore, at fifty cents each number, containing two complete plans of houses, with full estimates of the cost. The work is doing much good by the dissemination of correct information on architecture.

AMERICAN JOURNAL OF SCIENCE & ARTS.—We have received the March number of this excellent work. As usual, its contents are of a high character in a scientific view. Among other articles, we notice the following: Some new discoveries respecting the Dates on the Great Calendar Stone of the Ancient Mexicans, with Observations on the Mexican Cycle of Fifty-two Years, by E. G. Squier; on the comparative value of different kinds of Coal for the purpose of Illumination; and on methods not hitherto practiced for ascertaining the Value of the Gases they afford, by Andrew Fyfe; Parallelism of the Palæozoic Formation of North America, with those of Europe, by Ed. de Verneuil, translated with corrections, by James Hall; Notes on Upper California, by James D. Dana. This work is conducted by Messrs. Silliman & Dana, and published at New Haven, on the first day of every second month, at $5 per year.

THE SCHOOL JOURNAL AND VERMONT AGRICULTURIST, is the title of a monthly (16 page octavo.) published at Windsor, by Messrs. Bishop & Tracy, the editors of the "Vermont Chronicle," the Nos of the current vol. of which have come to hand since our last. It is devoted in equal parts, to Agriculture and the cause of Education in Common Schools, a subject of great importance to our farmers, so many of whom are dependant upon these schools for all the "schooling" they receive. It is handsomely printed, and published at the extremely low price of twenty-five cents a year, where 16 copies are taken.

WORKING FARMER.—We have received the first number of a publication with this title, published at New York, by Kingman & Cross, and edited by Prof. J. J. Mapes. It is a well filled quarto of sixteen pages, and is to be issued monthly, at fifty cents a year.

WOOL GROWER AND MAGAZINE OF HORTICULTURE.—This is a periodical just started at Buffalo, by T. C. Peters, Esq. It is to be published monthly, each number containing sixteen pages octavo, at fifty cents a year. Mr. P is favorably known as an agricultural writer, and will, no doubt, make an interesting paper. It will give particular attention to all branches of the wool business. It is to have a horticultural department, to be conducted by B. Hodge, an intelligent and experienced cultivator.

Answers to Correspondents.

STAGGERS IN SHEEP.—A. G. M., Isle of Wight, Va. The disease you call "blind staggers," is what is called "sturdy" by veterinarians. It is caused by parasitic animals in the brain, called *hydatids*. The origin of these animals, and the means by which they are propagated, are not fully understood. Hogg, the Ettrick Shepherd, says the disease is most destructive on farms that are ill-sheltered, and on which the sheep are most exposed to blasts and showers. A cure is seldom effected. It is recommended to remove the animals, as soon as attacked, from wet places to dry situations. Some have been cured by trepanning, and the extraction of the hydatids.

BONE SPAVIN.—W C. B., Colchester, Ct. The disease which has attacked the hock joint of your horse, is probably bone spavin. The safest treatment for it is blistering, which, if long continued, may absorb the bony deposite, or at least lessen the inflammation. The use of the chisel or the hot iron, in cutting or burning the swelling, is discouraged by the best farriers

TOBACCO FOR SMOKING—A. C. R., Walden's Ridge, Tenn. We are unable to give you the *modus operandi* of raising tobacco in Cuba, exclusively for smoking. An account of the mode of raising tobacco in Connecticut, will be found in the Cult for 1844. p. 89.

FOWLS EATING FEATHERS.—"A Subscriber," Windsor, Ct. The habit of eating each other's feathers, which fowls often have, when confined in yards, is not perhaps, fully understood. It is a morbid appetite, apparently induced in the outset, by the impatience of the fowl under confinement. It is very difficult to cure, and we have known it to be kept up till some individuals of the flock, who were made special victims, were almost entirely stripped of their feathers, and sometimes have even had their entrails torn out. The best preventives are animal food, bones, (not burnt) oyster shells, charcoal, and a variety of grains, with clean apartments, and plenty of clean water. Sometimes a particular fowl, shows a more inveterate disposition to eat feathers than the rest of the flock. It is best to kill or remove such.

TIE-CHAINS FOR CATTLE —S. G., Bullville, Orange Co, N. Y. The common, and we think the best mode of using these chains, is around an upright stanchion, which is inserted at the lower end into a piece of timber, laid along to form one side of the manger, and for the cattle to feed over. A separate stall and feeding space is preferable for each animal. (See Cultivator for 1847 pp. 184, 185.

FATTENING HOGS.—W. R. W., Vienna Cross-Roads, Ohio In answer to the question whether you "can raise and fatten fifty hogs on one thousand bushels of corn?" we think much would depend on the *degree of* fatness to which they were to be brought. But with a good breed of hogs and proper care in feeding, we should think 20 bushels of corn would make 200 pounds of pork—or ten pounds to a bushel. Some trials have shown twelve pounds to the bushel.

USE OF LIME —M. L. C., Sangerfield, Oneida County, N. Y. We should think it probable that lime would be useful as a manure on the drained swamp you describe, though at the price you mention, 18 cents per bushel, we have doubts whether its use would be profitable. Better to try it first on a small scale The vegetable matter of the swamp would be valuable to absorb the urine of animals, and would probably be a good manure, mixed with ashes.

WHITE CLOVER SEED—W R, Canada West. The price of this article is thirty-five cents per pound, by the small quantity. It can be had at the Albany Agricultural Warehouse It is not easy to save the seed, as it is seldom grown by itself. Most of the seed sold in this country is imported from Holland.

GRAFTING PEACHES.—C. S., Shelburne, Mass. Peaches are not readily propagated by grafting, and we should think it would not be an object to make the attempt. Budding is the mode generally adopted for this fruit. In regard to remedying the difficulty you experience from the buds winter-killing, we should be glad to receive the suggessions of our correspondents.

MADDER.—The proper time to obtain the roots of madder is autumn They can be had of J. Eaton, of West Winfield, N Y., at $2 50 per bushel—delivered at Utica.

GRASS FOR PARKS —W. H. T, New York. It is not easy to obtain a firm, velvety turf, in closely wooded parks. The best grass we are acquainted with for this purpose, is the common spire grass, or Kentucky blue grass—*Poa pratensis* Of the Bermuda grass, grown in the Southern states, we have no personal knowledge. The seed of the Kentucky blue grass can be obtained of the seedsmen in New York. It may be sown any time in spring, when the ground is moist. About a bushel, or ten pounds of tolerably clean seed, will be sufficient for an acre.

Notes for the Month.

Communications have been received, since our last, from A Subscriber, B. B. P., A. G. Moody, R., T., Agricola, S. W. Gold. A Subscriber, R*****, Jason Smith, Farmer, W. Bacon, Fleming Grove, G. H. Dadd, J. W. Bailey, J. S. Pettibone, John Tufts, Daniel S. Curtis, M. L. Conger, S. E. Todd, Sportsman, Charles Smith, M. S. Bailey, S. W., R. D. Weeks, I. Hildreth, L. B. G , J. M'Kinstry, J. D. Spinner, C. W. Hillman, R. H. Drake, F. E. Stowe, Reed Burrett, A Practical Farmer, A. J. Keeney, A Raw Hand, Subscriber, E., B. M. Ellis, A. L. Fish, O. R., B. C. M., A subscriber, E. C. Frost, S. W. Jewett.

Books, Pamphlets, &c., have been received as follows: Transactions of the Mass. Ag. Societies for 1847, and of the Worcester Co. Society for 1848, from J. W. Lincoln, Esq.—Catalogues of Thorp, Smith & Hanchett's Syracuse Nursery, and of Hovey & Co's. Pears, Boston—of the Delevan Nursery of F. K. Phenix, Delevan, Wisconsin—of B. M. Watson's Nursery, Plymouth, Mass.—of C. Hamilton's Nursery, Canterbury, N. Y.

☞ Though we publish over thirty communications this month, we have still a goodly number on hand, several of which were intended for this paper, but are delayed simply for want of room. Among these, are those of Dr. Martin, Mr. Holbrook, Mr. Bailey, W. C. W., (this was accidentally mislaid, or it would have had an earlier insertion,) S. W., and others.

Postage of the Cultivator.—In answer to several inquiries, we repeat the notice heretofore frequently given, that "The Cultivator" is subject to "*newspaper postage only.*" See certificate of Postmaster General, in our last year's vol., p. 97.

To our Agents.—It is not necessary that all subscribers should be at one place, or that all names should be forwarded at one time, to enable Agents to receive the paper at the club prices. For instance, if an Agent sends us $2 for two copies, he will be entitled to five more copies for $3—an Agent sending $5 for seven copies, will be entitled to three more copies for $2, or eight more for $5—and three copies for every $2 sent afterwards. We will send the papers to any number of post-offices named, addressed to the individuals named.

R. R. P.—We have not one of the numbers you require to complete your vols. of the Cultivator. ☞ All our unbound Nos. of Vols. 7, 8, 9 and 10, old series, were burnt.

Agricultural Education.—The subject of establishing an institution for the purpose of giving special instruction in reference to agriculture, was brought prominently forward by Gov. Fish in his late message to the legislature. Responding to the recommendation of the Governor, the New-York State Agricultural Society, at its annual meeting in January last, appointed a committee to memorialize the legislature on the subject. A memorial was consequently submitted, in reference to which the Committee on Agriculture for the legislature, brought in a bill, providing,—1. That the State shall appropriate $50,000 for the establishment of an Agricultural School and Experimental Farm; the object of which shall be "instruction in the sciences, in the theory and practice of agriculture, the breeding, raising and improvement of farm stock, in veterinary treatment, in general farm management, in horticulture and gardening," &c. 2. It proposes that the Governor shall appoint a Board of Trustees, to consist of nine persons, one of whom shall reside in each judicial district, to carry the provisions of the act into effect.

The remaining provisions of the bill we omit for the present, as it is now under discussion, and may receive various modifications in its passage.

Mr. Vail's Sale of Short Horns.—We would call particular attention to this sale, an advertisement of which will be found in this number. Mr. Vail has taken great pains in the collection of his herd,—has imported several fine animals from England at very high prices,—and has purchased others here, including some of the best of Mr. Prentice's late herd, at such rates as are always commanded by the best stock. He has also, some choice young animals, of both sexes; and we think those who wish to purchase stock of this breed, can hardly fail to find in this herd, such as will meet their approbation.

New Importation of Short Horn Cattle.—Col. J. M. Sherwood, of Auburn, has lately made an importation of a bull and three heifers, from England. The bull is known as 3d Duke of Cambridge, registered in the fourth volume of the Herd Book as follows:

Third Duke of Cambridge, (5,941,) roan, calved September 14, 1841, bred by Thomas Bates, Kirkleavington, Yorkshire; got by Duke of Northumberland, (1940,) dam, Waterloo 2d, by Belvidere, (1706,) g. d. by Waterloo, (2816,) gr. g. d. by Waterloo, (2816.)

The heifers, which are from eight to ten months old, were all bred by Mr. J. Stephenson, of Stockton-on-Tees, who has long been known as one of the most successful breeders in England. Among other superior animals bred by him, may be mentioned the celebrated bull Belvidere, of whose blood, it will be seen, 3d Duke of Cambridge possesses one-half—both the sire and dam of the latter having been begotten by the former.

We had the opportunity of seeing Col. Sherwood's animals, as they passed through this city. The bull is certainly one of the finest we have ever seen—whether home-bred or imported—both in respect to perfection of form and handling. The heifers are all fine, and without designing any invidious comparison, we may venture to say that the equals of two of them will be found "few and far between."

Fat Animals.—The markets in Albany presented an attractive display of fine meat on the 22d of February. At the Centre Market, Mr. Ed. Kirkpatrick exhibited the beef of two young cows, (four years old) which weighed,—quarters, hide and tallow,—1200 pounds each. They were raised by Mr. Clement Leach, of Eaton, Madison county. The finest one appeared to be a cross of the Durham and Devon.

Mr. James McQuade showed the carcasses of two fat heifers bred by E. P. Prentice, Esq., of Albany, and fattened by Mr. John B. Packer, of Charlton, Saratoga county. The largest weighed 1400 lbs.

Messrs. Putnam & Shaw, at the North Market, showed the quarters of a pair of very superior oxen, raised by Mr. Henry Rhodes, of Trenton, Oneida county, and fattened by Mr. Lyman Brainard, of Attica. These cattle received one of the premiums at the State Fair at Buffalo. Their live weight was 4912 lbs.—dead weight, beef 3430 lbs.—hides 300 lbs.—tallow 324 lbs.—total weight 4,054, or 2,027 lbs. each. These oxen were a cross of the Devon breed with the common stock—were of extraordinary fatness and great weight in proportion to the bone and offal.

Mr. Kirkpatrick had the carcasses of six fat sheep, and Messrs. Putnam & Shaw the same number, mostly a cross of the Bakewell or Leicester and Cotswold breeds, the weight of which ranged from 100 to 130 lbs. each.

Blood Horse.—An advertisement of the imported thorough-bred horse "Consternation," will be found in this number. He is a fine horse, and we are told that his progeny are very promising.

Morgan Horses.—We invite attention to the advertisement of the "Gifford Morgan," and the "General Gifford," to be found in this number. They are both prime animals.

Morgan Horse in Ohio.—We are informed that Mr. N. E. Austin, of Hartford, Trumbull county, Ohio, has procured one of the Morgan horses exhibited at the Show of the New-York State Ag. Society, at Buffalo, by J. Henderson of Mendon, Monroe county. This horse, as we are informed, was bred in Vermont. He is an active, well formed animal, showing much of the genuine Morgan spirit and power.

The Cultivator for Small Farmers.—A correspondent at Susquehannah, Broome county, N. Y., writes: "The idea that the Cultivator is more useful to the large farmer than to the small one, I think very erroneous. In the pages of the Cultivator, every man engaged in agriculture, whether he cultivates one acre or one thousand acres, may, in my view, find information worth much more than the money paid for it."

Good Butter and Good Firkins.—Inquiry is frequently made as to the best wood for firkins. In reference to this inquiry, we have before stated that oak, ash, birch, maple, and spruce, if of proper quality and properly seasoned, had been found to answer well. In regard to maple and spruce, we have lately heard of their use by several dairymen who are noted for the fine quality of their butter. The writer is using from a firkin of prime butter made last autumn, by Wm. Pierce, of Worcester, Otsego county. The firkin was the best of heart spruce, and the butter, which was made in the best manner in the first instance, has kept perfectly sweet. It has not the least taste of the wood, or of rancidity, even where it comes in direct contact with the sides of the firkin. It is proper to remark that the wood alluded to is the white spruce, (*Abies alba,*) and not the hemlock, (*A canadensis,*) which in some sections is called spruce.

HUTCHINGS' PANORAMA OF THE SEA AND SHORES OF THE MEDITERRANEAN.—Having had an opportunity of viewing this splendid work of art, we cannot refrain from calling the attention of the public to it. It is not only beautiful as a picture, but in a high degree interesting and instructive in a geographical view. The representation of places which have long been celebrated in history, conveys to the observer a more correct idea of their situation and appearance than it is possible to obtain in any other way, short of ocular observation.

LARGE HOG.—Dr. P. G. BERTOLET, of Oley, Berks county, Pa., informs us that Mr. ISRAEL RITTER, of that place, slaughtered a hog on the 20th of January last, which was seventeen months old, the weight of which, dressed, was 734 pounds.

EXPORT OF APPLES FROM WASHINGTON COUNTY, OHIO.—Dr. HILDRETH states that that portion of Washington county bordering on the Ohio river, furnished for exportation, last year, twenty-three thousand barrels of Apples. This is an admirable section for this fruit. The first settlers were from the New-England States, and planted large orchards, of the best varieties known.

PALMER'S WHEAT DRILL.—We have received a cut and communication in reference to this machine, which not having arrived in time for this number, we are obliged to postpone to our next.

ERRATA.—In Mr. TODD's communication on "Protection of Working-Horses," &c , in our last, p. 94. the transposition of a line occurs. The *seventh* line from the bottom should have been placed between the *tenth* and *eleventh* lines. The *nineteenth and twentieth* lines from the top, second column, of the same article, should read —and to suffer the penalty of violating a physical law—instead of "and to suffer the penalty of a violent physical law."

Premiums for Subscribers to The Cultivator.

Our offer of Prizes for subscribers to the current vol. of *The Cultivator*, was intended as an experiment; and though some complaint was made that they were offered for the greatest number, without regard to population, &c., the experiment has equalled our anticipations With our present experience, we shall be able another year, we hope, to offer a List of Premiums, which will prove satisfactory to all who may be disposed to aid us in extending the circulation of our journal.

According to the conditions, (for which see last page of Jan. or Feb. Nos.) the Prizes for this year are awarded as follows :

1st. To James M. Tower, Waterville, Oneida Co., N. Y., for 102 subscribers, $50.

2d. To Hon. Anthony Van Bergen, Coxsackie, Greene Co., N. Y., for 97—$40.

3d. To C. T. Alvord, Wilmington, Windham Co., Vt., for 90—$30.

4th. To Jas. Wells, Johnstown, Fulton Co., N. Y., for 87—$20.

5th. To O. C. Chamberlain, Richfield Springs, Otsego Co., N. Y., for 67—$10.

6th. To P. Kirkpatrick, Hobart, 66—Willets Keese, Peru, 57—C. P. Waller, Honesdale, Pa., 52—A. Carey, Fort Plain, 51, and Geo. Hezlep, Gustavus, O., 51—for the five next highest lists, each the 1st and 2d vols of the Horticulturist, bound.

7th. To James D. Spinner, Herkimer, 48—L. W. Curtis, Madison, 45—H. Mills, Lowville, 43—Jas. La Roche, Wilmington, Del. 42—M. Davis, Jr., Lynchburgh, Va., 41—B. Macomber, Grand Isle, Vt., 40—Thomas Briggs, Jr., Kingston, Can., 39—Wm. H. Woodburn, Newville, Pa., 36—C F. Mallory, Romeo, Mich., 33, and Wm. H. White, Vergennes, Vt., 34—for the next ten highest lists, each, a copy of the 2d vol. of the Horticulturist, bound.

8th. To H. B. Tracy, Norwichtown, Ct.—S. Brainerd, Cedarville—J M. Hart, Oswego—R. A. Tappan, Newark Valley—W. S. Maynard, Ann Arbor, Mich.—Charles Root, Gilbertsville—F. H. Fessenden, Brattleboro, Vt —J. Brown, Battle Creek, Mich.—R. S. Bartlett, Binghamton, and E. D. Freeman, Amenia—for the ten next highest lists, each, vols. 5 and 6 of The Cultivator, for 1838 and 1839.

9th. To Wm. M'Kinney, Ida Mills—L. Richmond, Woodstock, Vt.—J. H. Reid, Frederickton, N. B.—D. R. Wheeler, Ellicottville—O. Stevenson, Pleasant Mount, Pa.—John M. Sands, Pleasant Valley, Pa.—A. A. Mullett, Springdale, O.—M. Heminway, Watertown, Ct.—C. Babbit, Walpole, N. H., and Wm. Bailey, Spencertown—for the ten next highest lists, each, a copy of Downing's Fruits and Fruit Trees, or any other work of like amount.

10th. To W. S. Carter. Quechee Village, Vt.—D. S. Curtis, Canaan Centre—Edward Mattoon, Westerville, O.—Charles Anderson, Allegany City, Pa.—A. N. Barber, Harwinton, Ct.—J. A. Ely, Poughkeepsie—Geo. Edwards, Bath—L. Helmer, Ilion—J. Miller, Schoharie, and F. E. Stowe, Bruceville, O.—for the ten next highest lists, each, a copy of Thomas' Fruit Culturist.

Prices of Agricultural Products.

New-York, March 22, 1849.

FLOUR—Common State and Michigan, per bbl., $5.37a$5.50—Fancy brands, $6.12½a$6.50.

GRAIN—Wheat, per bush., $1a$1.12—dull. Rye, 60a61c. Indian Corn, Northern, 59a60c.—Southern, 53a56c.

BUTTER—best, per lb., 20a22c.—western dairy, 14a17c.

CHEESE—per lb., 6a7½c.

BEEF—Mess, per bbl., $11.50a12.50—Prime, $7.50a$8.75.

PORK—Mess, per bbl., $11.12a$11.50—Prime, $9.25.

LARD—per lb., 6½a7½c.

HAMS—Smoked, per lb., 8¾a10¾c.

HEMP—American dew-rotted, per ton, $155 160.

TOBACCO—per lb., Kentucky, 5a8.

COTTON—Upland and Florida, per lb., 6½a7½—New Orleans and Alabama, 7a9c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

REMARKS.—There is a steady demand for breadstuffs, and considerable stir in the pork trade. Nothing special to note in other parts of the market.

Fishkill Landing Nursery,

Two and a-half miles North from the Newburgh Ferry.

FRUIT AND ORNAMENTAL TREES.

THE subscriber respectfully solicits the attention of Fruit growers and dealers in Fruit Trees to the large stock offered for sale by him this spring, consisting of

20.000 APPLE TREES,

of the most approved varieties, from 4 to 8 feet high, at from $15 to $20 per hundred.

10,000 PEAR TREES,

embracing one hundred of the best varieties to be found, 3 to 7 feet high —$25 to $34 per hundred.

8,000 CHERRY TREES,

from one to three years from the inoculation, 4 to 10 feet high—$31 per hundred.

5,000 APRICOT TREES,

of the best sorts, on peach and plum stocks; 2,000 of which are the Early Golden, a very hardy and productive variety, one to three years from the buds—$12.50 on peach, and $31 on plum stocks per hundred.

30,000 PEACH TREES,

of the most valuable sorts, entirely free from disease, one to two years from the inoculation, $6 to $8 per hundred.

5,000 ISABELLA AND CATAWBA GRAPE VINES,

two to four years old, with fine roots. They have been annually cut back, and are in excellent condition for vineyard planting—$12 to $18 per hundred. Also,

1,000 QUINCE TREES,

mostly of the Apple variety. Currant and Raspberry Bushes, Strawberry Vines, &c., together with about 10.000 Deciduous and Evergreen Ornamental Trees, many of which are extra large.

The subscriber is induced to sell at the very low prices above named, in consequence of the stock being very large. All those who are about planting orchards, starting nurseries, or engaged in the sale of trees, are invited to visit and inspect his stock. The Fruit Trees have been inoculated under the immediate inspection of the proprietor, and mostly from trees in his own grounds, and are *of the most valuable standard sorts.*

From 40 to 50 acres attached to the Nursery are closely set with standard and specimen trees, which greatly increase his facilities for the attainment of correctness.

The new and valuable Peaches which have within a few years past originated at the South, as well as the choice Apples of the West, have been propagated, and are of a fine size for transplanting.

TREES, SHRUBS AND VINES

when ordered, will be taken up carefully, and packed so as to be sent safely to any part of the Union.

Catalogues sent to all post paid applicants. Orders, by mail or otherwise, will receive immediate attention.

DANIEL BRINCKERHOFF.

Fishkill Landing, April 1, 1849.—1t

Valuable Property for Sale.

THE undersigned offers for sale in one body, or in portions, or for Lease to tenants well recommended, the well known CARPENTER'S POINT FARM and Fisheries, situated in Cecil Co., Md.—at the head of the Chesapeake Bay, and on the west bank of the North East River. The shores command the waters both of the bay and the river, and are among the most valuable in the State; they include a number of the buildings and sheds necessary for the active prosecution of the fisheries; the land is of easy cultivation, and enjoys the advantage of ready access by water communication, to the markets of Havre de Grace and Baltimore The entire tract contains about 650 acres, of which some 125 are under actual cultivation, as many more lying out as common, whilst of the remainder, one half has been recently cleared and the other is very heavily timbered.

For further information, or for wood-cut map showing the position and shape of the property, and the prominent places in its vicinity, application may be made to George Earle, Elkton, Md ; J F. Houston, Columbia, Pa ; J. S. Skinner & Son, Philadelphia ; the office of this paper, or to J. HOWARD McHENRY,

April 1.—1t * Baltimore.

Short-Horns at Auction.

THE subscriber being about disposing of 60 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr. Whittaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq. of Yorkshire, Eng, from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opininon, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

"The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given —say 6 to 12 and 18 months, if desired The particulars will be given in the pedigree list. GEO. VAIL.

Troy, April 1, 1849.—3t.

Farm for Sale.

THE subscriber will sell his farm of 300 acres, situate near the centre of the town of Hillsdale, in the county of Columbia, known as the

MCKINSTRY PLACE,

Having been possessed by that family about a century, lying adjacent or contiguous to the route of the Harlem Railroad, and upon which there are 2 good and convenient dwelling houses, one a recently built cottage, and barns, sheds, lofts, and numerous out houses, two wells of pure soft water of a superior quality, excellent orchards of grafted fruit, fine stone wall fences, some first rate fields for any kind of grain, about 45 acres of meadow land, and about 80 acres of wood land, well watered by springs; three small streams run through it, the head waters of the Roeliff Jansen's Kill or Creek rendering it a desirable farm for grazing, and valuable to practical farmers for other purposes of husbandry. It is capable of being divided into two good farms. Title made unquestionable by the undersigned, with the aid and assent of Judge Augustus Tremain, who now resides on the premises; land now worked and occupied by Mr. James Darrow. The farm is now well stocked with Devonshire cattle, and a choice flock of Saxon sheep, which, together with the farming utensils, will go with the old Homestead, if the purchaser wishes.

JUSTUS McKINSTRY.

If desired, one-third or one half of the purchase money can remain on bond and mortgage for a term of years.

Hudson, April 1.—2t.*

Agricultural Ware House,

193 *Front Street, New York.*

THE subscriber, manufacturer and dealer in Agricultural Implements, offers for sale a large assortment of PLOWS, embracing over 200 different sizes and patterns, among them the superior *Premium Plow*, which received the highest premium of the American Institute in 1848, and of the great State Fair in 1847.

This Plow has no equal for lightness of draft, and for all purposes, is recommended with full confidence as being the best in use.

He has also the Centre Draft and Eagle Plows, which will be sold at the lowest rates.

Also. Cultivators, Straw Cutters, Corn Shellers. Fanning Mills, Grain Cradles, Corn and Cob Mills, Portable Grist Mills, Horse Powers, Threshing Machines, and a general assortment of Farming and Gardening Implements, all of which will be sold at extremely low prices.

Brass and Iron Wire Cloth Seives, Screens, &c.

Bone Dust and Guano. JOHN MOORE,

April 1.—2t. 193 Front street, New York.

The old Morgan Gifford,

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms $25, $5 of which to be paid at the time of service, and the remaining $20 if the mare proves in foal.

Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.

March 1, 1849.—5t.*

The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays. Thursdays and Fridays at the stable of D. A. Munro, in Camillus; on Saturdays, at the stable of John C. Munro, in Bellisle.

Terms, $10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action, General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19. MUNRO & MASON.

April 1, 1849—3t.

The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stitenham, Yorkshire, England, in the year 1841. He was imported by C. T. Abbot, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences, will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position He is compact and short-legged, yet of a rangey and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro—her dam by Waxy; Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle; Henry Rhodes, Trenton; A. Ford or John Best, Rome, and to farmers generally in that vicinity.

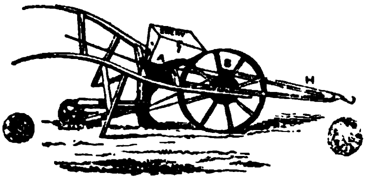
Terms $5 in advance, and $5 additional if the mare is got in foal. April 1.—3t. J. B. BURNET.

To Wool Growers.

A Gentleman who owns 6,000 acres of land in the southern part of the State of Pennsylvania, would like to make an arrangement with a practical man who has the ability to stock part of it on joint account. Any one disposed can address for further information, W. E. T. No. 17 South Water St., Philadelphia

April 1.—1t *

Emery's Albany Seed Planter.



THE subscriber having had all his patterns for this machine, as also nearly one hundred machines mostly completed destroyed by the late fire, has made an entire new sett, with several important improvements suggested by their use during the last three years.

He is now enabled to offer a much better planter than heretofore, notwithstanding it has already earned the reputation of being "the best planter in use."

Orders solicited and machines warranted.

Albany Agricultural Warehouse, Nos. 369 & 371 Broadway

H. L. EMER

Wheeler's Horse Powers, Threshers and Separators.

CONTINUED FROM MARCH NO.

For Engravings and Descriptions of these machines, together with prices, &c., see the March No. of The Cultivator, page 102. For further information respecting them, the public are referred to the following persons who have purchased of me and are using the said machines:

New-York.

Albany—James McNaughton, John McD. McIntyre, Amos Osborn and E. C. Delavan.

Auburn—Joseph Scantlebury.

Buffalo—T. C. Peters & Brother and Edward Cowles.

Ballston—John Talmadge.

Berne—Paul Haverly.

Bethlehem—Peter Magee.

Canajoharie—James Gordon.

Central Ridge—Jacob Enders.

Charlton—Charles Gilchrist and Thomas Kirby

Caroline—Herman Landon.

Coeymans—James J. Mull and Samuel T. Morris.

Chesterville—Christopher Filkins.

Duanesburgh—Alexander Millan, Thomas Knight, Jas. Lendium and James Vaudervier.

Esperance—L. & J. Rockwell.

Ellicottville—Wm. Somerville.

Florida—Samuel C. Jackson.

Fonda—Reuben Howe.

Greenbush—J. P. & G. W. Luther, Andrew Phillips and David Harrington.

Greece—Robert Sherman.

Grove Centre—Darius Scovill.

Grovement—Patrick Hughes.

Genoa—James Dunn.

Ilion—Samuel Barringer and Rudolph Getman.

Johnstown—Edward Wells.

Knox—John Basler.

Knoxville—John Dyer and Andrew Batcher.

Lafargeville—J. N. Rottiers.

Leatherville—Samuel J. Walker.

Mechanicsville—Frederick & George Edwards, and Samuel R. Mott.

Middlebury—Nathaniel Manning.

Minaville—James Herrick.

New Scotland—Peter McHarg, John H. Johnston, Peter S. Markle, Andrew Onderdonk and J. V. N. Houghtaling.

New York—A. B. Allen & Co., (10 sets.)

Oswego—Hamilton Murray.

Owego—George J. Pumpelly.

Palatine—John A. Zoller and Christian Snell.

Plattsburgh—James McCreedy.

Port Jackson—S. Thorn.

Reidsville—Hamilton and John Hempstead.

Rensselaerville—Abner West, Square Cook, Luther Hazard, Benjamin Palmer and Erastus Cooke.

Ridgway—Wm. F Potter.

Root—Henry Lyker and Robert J. Mitchell.

Schodack—Jacob H. Best, John Phillips and Wm. Hagerman.

Schoharie Court House—Abram Deitz and Martin L. Shaffer.

Schaghticoke—Ira Gifford and Amos Briggs.

Schenectady—A. H. Ostrander, M. E. Myers, Isaac Vedder and A. L. Linn.

South Danby—E. L. B. Curtis, (2 sets.)

Scottsburgh—Charles Brewer.

Sparta—Benjamin Bonner.

Summer Hill—George Newton.

Schoharie—Charles Frink.

Troy—Henry Warren, (4 sets.)

Weedsport—Aaron Bayles and Peter Douglas.

West Charlton—Robert Gilchrist.

Washington—Levi G. Collins.

Westerlo—Hamilton Ford and Hiram Hempstead.

Vermont—W. Brown, Alburg—Pierce, Davy & Co, Burlington—A. L. Hatch and D. E. Griswold, (4 setts,) Grand Isle—Dyer Hill, Isle La Mott—John Wood and Loyal Huntington, Middlebury—Timothy D. White. South Hero.

Massachusetts—P Howard, Ashby—Ruggles, Nourse & Mason, Boston—W. H. H. Sigourney, Grafton—Horace Emery, Townsend—D. A. Wood, Webster—Paul Whitin & Son, Whitinsville—J. C. Morse. (4 sets,) Worcester.

Rhode Island—J. L. Durfee, Newport—Philip Almy and David Almy, Portsmouth.

Connecticut—C. A. Hotchkiss, New Haven—S. J. Stoddard, South Britain.

Pennsylvania—M. Bell, Hollydaysburgh—L. & R. Styles, Troy.

South Carolina—John N. Scofield, Columbia.

Virginia—J. Hardesty, Harrisonburgh—W. Peters, Georgetown, D. C.

Ohio—Samuel Monk, Cincinnati—John Howell, Huntsburgh—J. V. Stanhope. Kinsman—E. T. Osborne, (2 sets,) Sandusky—John Stouffer. Xenia.

Indiana—Otis Hinkley, Mount Vernon.

Illinois—Dav. Hughes, Antioch—J. A. Wight, (4 sets,) Chicago—George H. Easton. Half Day—Elijah Willard, Jonesborough.

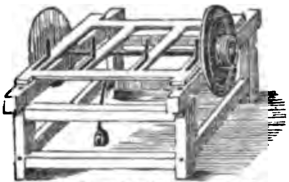
Michigan—J. L. Smith. Lexington—J. A. Austin. Portsmouth.

Wisconsin—D & M. Conover and H. B. Hawley, Milwaukie.

Canada East—R. N. Watts. M. P. P., Drummondville—Francis [illegible], Batiscan.

Canada West—James Croil, East Williamsburgh—Donald Mc D[illegible] Andrews

Emery's Saw Mill.



The Mill is made strong with joint bolts, patent metalic boxes, large and long shaft and heavy fly wheel, and may be used with the single or double Horse Power. For Single Power, a 22 inch saw is used; for a Double Power, a 24 inch saw, and with the One Horse Power and two men, from ten to fifteen cords of hard wood may be cut twice in two per day, or as much soft wood as they can handle.

The same Mill, by changing saws, can be used for slitting boards and plank for fencing, &c.

Price, with 22 inch saw, in complete running order, $35.

Grant's Fanning Mill.

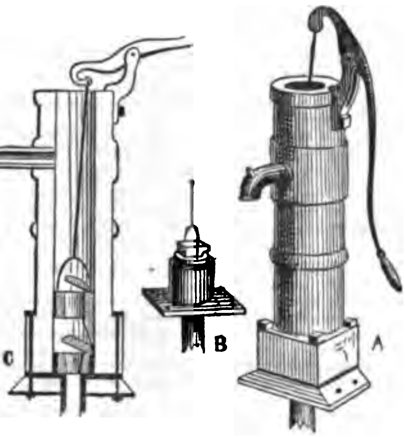
This is considered one of, [if not] the best mills in use. It is equally well calculated for all kinds of grain, clover and grass seeds. It may be operated by hand or horse power. The largest size, when attached to the Horse Power, with one person to feed it, is capable of cleaning perfectly one hundred bushels of wheat per hour, as it comes from the separator of the threshing machine. This Mill has received the first premium at four of the New York State Fairs, also at the State Fair of Maryland and Pennsylvania Certificates are unnecessary, as all mills are warranted. Price for No. 1, $21; No. 2, $23; No. 3. $25; No. 4, $27; with pulleys, $30. The above Machines are for sale at the

Albany Agricultural Warehouse & Seed Store,

Nos. 369 & 371 Broadway, Albany, N. Y.

HORACE L. EMERY

☞ Price and descriptive catalogues, Gratis.



Adams' Patent Pump.

The above cut represents the most approved and simple arrangement for well or cistern pumps—at the same time combining cheapness and durability, and little or no expense for repairs.

It having been extensively used in many sections of the country for ten years, its excellence has been established beyond a doubt.

The manufacturer recently received a diploma for its being the "best pump," from the Massachusetts Charitable Mechanics Association at Boston.

It being made of saturated wood, and water proof, it neither freezes, splits or decays. It is readily connected with lead pipe of any size, by means of a solid metalic flange and cup, as seen at B. in the cut—the lower box and valves are set within the cup, and all inserted in the lower end of the barrel of the pump—until the flange (by means of melted resin) makes a water proof and tight joint with the barrel; when a base board (with a hole through the centre for the passage of the supply pipe) is bolted firmly against the under side of the flange; thus forming a strong and permanent connexion.

The valves are so constructed that by throwing up the handle the upper box trips the lower valve, and the water instantly falls back—leaving the pump empty. Rights for making and using the pump in this State and the Western States, can be obtained by addressing the subscriber. They will be furnished to the trade at wholesale or retail, on as reasonable terms as any metalic pump.

HORACE L. EMERY.
No. 369 & 371 Broadway, Albany, N. Y.

A Book for Everybody.

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Veterinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

FIRST—It is a mature work and a practical one, one upon which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

SECONDLY—It will have an unprecedented sale on account of its cheapness. It makes a volume of 288 closely printed pages. Illustrated with nearly 200 beautifully executed engravings, by Brown, and is sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It contains full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work is just from the press, and is now for sale at our counter, and will be offered for sale by our regular agents throughout the country.

JOHN P. JEWETT, Publisher, 23 *Cornhill*, *BOSTON*.
April 1.—2t.

Highland Nurseries, Newburgh, N. Y.

(*Late A. J. Downing & Co.*)

FRUIT AND ORNAMENTAL TREES, &C.

THE undersigned beg leave to tender their acknowledgments to the patrons of this establishment, and the public in general, for a continuation of the extensive patronage bestowed on their predecessors. Their greatest ambition is to merit, in every respect, the high character which the nurseries have attained from the high standing of the former proprietors.

The subscribers, desirous of meeting the constantly increasing demand for the trees grown here, have already stocked nearly 20 acres of ground, in addition to the nurseries of the former firm, (A. J. D. & Co.;) among which are all the recent introductions of merit, both of this country and Europe.

Their stock of trees for spring planting is unusually large and fine, especially of all the *proved* and standard varieties.

10,000 to 20,000 APPLE TREES,

Three to four years from the bud; all budded on two to three year transplanted strong stocks. Trees eight to ten feet high, $25 per 100; and trees five to 8 feet high, $18 to $20 per 100.

10,000 PEAR TREES,

Embracing all the best and newest varieties, four to seven feet high. $45 to $50 per 100.

Also, a large stock of all the choicest and rarest kinds of Plum, Cherry, Apricot, Peach, Nectarine, and Quince Trees, &c., &c., together with a general assorment of Gooseberries and Currants, (all the new kinds.)

Grape Vines, Raspberries, Strawberries, Esculent Roots, &c. For prices, see Catalogue, supplied gratis on application, (*post paid.*)

A large stock of Evergreer and Ornamental Trees, Shrubs, &c. suitable for the embellishment of new grounds, street planting, &c., at very moderate prices.

Two year old Buckthorn and Osage Orange Plants, for hedges.

Portugal Quince Trees, standard high, six feet each,			$1 00
do do	Quenouille,	do	1 00
Angers, (true,)	do	do	1 00
Smaller trees of the above,			0 50

Orders respectfully solicited, and will receive prompt attention. Trees will be packed with the greatest care, and shipped to any part of the Union or Europe.

A. SAUL & CO.
Highland Nursery, Newburgh, March 1, 1849.—1t.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone*.

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,
March 1, 1849.—tf. West Milton, Saratoga Co., N Y.

TREES! TREES!

COMMERCIAL GARDEN AND NURSERY

Of Parsons & Co., Flushing, near N. Y.

THE Proprietors of this Establishment, invite public attention to their large assortment of every desirable variety of

FRUIT AND ORNAMENTAL TREE OR SHRUB.

Their importations of everything new in Europe are annually continued, and they offer a very large variety of

ORNAMENTAL TREES AND SHRUBS,

imported expressly for arboretums and pleasure grounds. Their collection of *Roses* is annually enriched by novelties from abroad, many of which may be found described in their new work on the Rose, recently published.

FRUIT TREES

Receive their particular attention, and are propagated under their personal supervision; this care, with their possession of extensive specimen grounds, in which is tested every variety of fruit they cultivate, enables them confidently to guarantee the genuineness of the varieties.

Their care in pruning and cultivation enables them also to send out thrifty and well formed trees. From their large scale of propagation, they can offer to dealers very liberal discounts, where hundreds or thousands are taken. Orders or inquiries can be addressed to the proprietors, at Flushing, near New-York, where Catalogues will also be furnished.

They have formed a branch at Brighton, near Boston, and by the entire success of their trees transplanted thither, have thoroughly proved the superior adaptation of Long Island trees to the soil and climate of any part of New England.

At the season of transplanting, a salesman will be at this branch to furnish those who may prefer obtaining their supply thence.

March 1.—2t.

Fruit Trees.

THE subscriber would announce to the public that he has for sale at his nursery, a general assortment of Fruit Trees, embracing nearly all of the choicest kinds, all of which have been obtained from the most reliable sources, or from bearing trees of well known varieties, and propagated with his own hands in the most careful manner; and a large quantity have been proved on his own grounds. His stock of apples especially, is unusually large and fine, and will be sold at reasonable prices, with a liberal discount to nurserymen and venders of trees. Persons at a great distance, wanting small trees, will be supplied at a corresponding price.

Scions for grafting or budding, of all the most rare and scarce varieties, at $1 per 200, with a discount where 50 or 100 varieties are ordered. And large quantities of the more plentiful kinds, at reduced prices, in proportion to quantity.

Red Antwerp Raspberries by the 1,000, cheap.

Catalogues gratis to all post paid applicants.

Canterbury, Orange Co., N. Y., –2t. C. HAMILTON.

To Nurserymen, Gardeners, and Horticulturists generally.

THE subscriber, for many years agent of the Highland Nurseries of Newburgh, having withdrawn from other engagements, has now devoted himself to the Commission Business, and intends giving special attention to the Nurserymen, Gardeners and Horticulturists of the country generally.

His arrangements for a regular correspondence with agents in Europe will be immediately completed, and prompt attention always given to the receiving goods from, and the forwarding goods to Europe.

He will also receive for sale, consignments of seeds or other goods, they may have to dispose of, and attend to the transaction of any business here or in Europe, with which they may entrust him. There being no such agency in the city, he hopes, by a strict attention to their interests, to render his services valuable, and respectfully solicits their patronage.

References—A. J. Downing, Esq., and A. Saul & Co., Newburgh; H. Reid, Murray Hill, N. Y., and Elizabethtown, N. J.

GEO G. SHEPPARD,
143 Maiden Lane, New-York.

N. B. Orders for Russia Mats, for Budding or Packing, immediately supplied. New-York, March 1, 1849.—2t.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, *Buffalo*, *N. Y.*

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample T. C. PETERS & BRO.
Buffalo, Dec 1—6t.

Red Antwerp Raspberries.

5,000 Plants of the true Large Red Antwerp Raspberry, for sale by the subscriber, at $6 per hundred or $50 per thousand. The Plants are large and strong, and warranted true.

S. A. BARRETT
Milton, Ulster Co., March 1, 1849.—1t.*

Thorp, Smith & Hanchett,

(*Late Thorp & Smith,*)

Proprietors of the SYRACUSE NURSERIES,

HAVE now ready for sale a very extensive stock of the most valuable kinds of FRUIT TREES, embracing most of the standard varieties, (including those most highly approved and recommended by the late Pomological conventions at New-York and Buffalo,) which, in *vigor, thriftiness and symmetry* of growth are not excelled by the productions of any other nursery in the State. Having more than *forty acres* now chiefly devoted to the cultivation of FRUIT TREES, they are prepared to sell at WHOLESALE *as largely*, at prices *as low*, and on terms *as reasonable*, as any other nursery establishment here or elsewhere. The superior quality of their trees must contine to recommend them to amateurs, who desire to unite ornament with utility; and to orchardists, whose chief aim is to obtain such only as are healthy and vigorous.

They have also, a large assortment of finely formed ORNAMENTAL TREES, and several thousand *Seedling Horse Chestnuts*, at very moderate prices.

Orders will be promptly attended to, and trees packed safely for transportation to any distance.

☞ Catalogues furnished *gratis*, to all *post-paid* applications. They may also be obtained, and orders left at the store of M. W. Hanchett, between the Railroad and Syracuse House.

Syracuse, March 1, 1849 —3t.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spirœa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolff, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

Descriptive priced lists sent to post paid applicants.

Feb. 1—4t. B. M. WATSON.

A Virginia Farm

FOR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat, corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear cherry and peach trees--many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern and physician quite near. Also, a market for all kinds of fowls, meats and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given, by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York.

March 1, 1849.—2t.

To Farmers.

THE LODI MANUFACTURING CO., have now on hand and ready for sale, a large quantity of their *NEW AND IMPROVED POUDRETTE* freshly manufactured.

They *guarantee* that every barrel or bushel they sell contains 66 *per cent of night soil*, and point to a reputation of ten years standing, as well as to the heavy outlay of capital in their business, as in some sort a surety against imposition.

Considering *night soil* as the *strongest ingredient* in their Poudrette, their mode of manufacturing is simply to disinfect and add sufficient vegetable fibre to absorb moisture.

Two barrels ($3 worth) will manure an acre of corn in the hill, planting four feet apart each way. One application is sufficient on good ordinary ground. On *poor* ground a second application is sometimes necessary to ensure a good crop. This manure has advantages in its use over guano or other manures, being the cheapest and quickest in operation. Corn manured with it will grow more vigorously, and mature earlier—while the yield is heavier in proportion.

Four bushels struck measure, are packed in a barrel. It will be sold at the following prices, *delivered in New-York* free of cartage or other expense: 1 bbl. $2—3bbls $5, 7 bbls. $10.50, and at the rate of $1.50 per bbl. for any larger quantity. At the Factory, 25 cents per bushel will be charged. A trial is respectfully asked.

All orders containing a remittance, with directions to ship, will be immediately attended to.

Apply, if by letter, post paid, to The Lodi Manufacturing Co., 51 Liberty st., New-York. March 1.—2t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

John Mayher & Co.

United States Agricultural Warehouse. 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct 1, 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

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NOW IN THE PRESS,

TO BE PUBLISHED BEFORE THE CLOSE OF THE MONTH,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain more than

TWO HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole will form a handsome duodecimo volume, at the low price of One Dollar. April 1, 1849.

Field and Garden Seeds.

A FULL and complete assortment of Field and Garden Seeds, warranted fresh and true of their kind.

A. B. ALLEN & CO.,
April 1.—1t. 189 & 191 Water street, New York.

Genuine Eagle Plows.

AS many spurious Plows from this city and elsewhere, are sold under the name of "Eagle," Farmers and Dealers are cautioned if they wish to obtain the *genuine* Eagle Plow, that they will always find "Ruggles, Nourse and Mason, Boston and Worcester," and "A. B. Allen & Co., New York," branded on the beam.

The subscribers being sole agents in New York for the above Plows, offer them for sale at the manufacturer's prices. Also, those of Minor, Horton & Co., and many others of the best and most approved kinds, making the largest and finest assortment to be found in the United States.

Other Agricultural and Horticultural Implements of all kinds for sale.

A. B. ALLEN & CO.,
April 1.—1t. 189 & 191 Water street, New-York.

Five Hundred Tons of Peruvian Guano,

FRESH from the Chinche Islands, for sale in lots to suit purchasers. Farmers will do well to be on their guard, of whom they purchase guano, as much is sold under the name of Peruvian which is spurious, and almost entirely worthless. To avoid imposition, each bag containing genuine Peruvian Guano, will have the brand of A. B. Allen & Co., Agricultural Warehouse, 191 Water Street, New-York.

Also Bone dust of superior quality, at 40, 50 and 55 cents per bushel. Poudrette, Plaster of Paris, Lime, and Patagonian Guano.

A. B. ALLEN & CO.,
April 1.—1t. 189 & 191 Water street, New York.

Albany Agricultural Warehouse,

Removed to 369 Broadway.

THE ALBANY AGRICULTURAL WAREHOUSE having been burnt in October last, and with it nearly the whole stock of Implements and Seeds, the subscriber has removed to the new and spacious store, No. 369 and 371 Broadway, where he is now prepared to supply all orders for Improved

AGRICULTURAL IMPLEMENTS, SEEDS, &C.,

Of which he has an entire new supply; and with increased facilities, and a better location for business, he solicits a continuance of the liberal patronage thus far extended to the establishment.

No. 369 Broadway, Albany. H. L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Osage Orange Seed,

WARRANTED good, and sure to grow if managed according to the directions furnished to purchasers, for sale. Price $25 per bushel, $7 per peck, or $1 per quart; Payment to accompany the orders. Packages can be sent by express during winter, via Cleveland, Buffalo, &c., or via. Wheeling, Baltimore, &c., or via Cincinnati, to all places on the Ohio and Mississippi rivers.

M. B. BATEHAM.
Ohio Cultivator Office, Columbus O., April 1.—2t.

Early Potatoes, Polish Oats,

SPRING Wheat, Rye, Barley, Seed Corn, various kinds, for sale at the Albany Agricultural Warehouse.

H. L. EMERY

Fruit and Forest Trees.

SHRUBBERY, Buckthorn and Osage Orange Plants, of one and two years' growth, Strawberry Plants, Grape vines, &c., &c., for sale at the nursery, corner Delaware turnpike and Morton St., Albany.

Orders left on the premises, or at H. L EMERY'S Agricultural Warehouse, No. 369 and 371 Broadway, Albany, will meet with prompt attention.

Albany, April 1, 1849 —2t.

Wendell's Mottled Bigarreau Cherry.

Described page 199, Am. Journal of Agriculture and Science.

THE subscribers offer for sale this spring, trees of the above new and choice variety of Cherry so much sought after by the admirers of this choice fruit. Price $1.

Also, their usual supply of

FRUIT TREES

viz: Apples, Plums, Pears, Peaches, Cherries, Apricots, Quinces, extra size. European Mountain Ash, and other Ornamental trees.

A liberal discount made to those who purchase in large quantities. WILSON, THORBURN & TELLER,
April 1.—2t. Nurserymen, Albany.

Fruit Trees for Sale.

THE subscriber has for sale this spring, a large and fine lot of the

GOLDEN APRICOT TREES,

Which he will sell as low as the same kind can be bought elsewhere. Also, a large and general assortment of Fruit Trees, Grape Vines, and Quince Bushes; among which are several thousand of the Frost Gage Plum trees.

Trees taken up and packed in the most careful manner.

An agent will be sent through the Erie canal at its opening who will safely deliver any packages of trees as directed.

CHARLES DU BOIS
Fishkill Landing, April 1, 1849.—1t.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

Advertisements—The charge for advertisements is $1. for 12 lines, for each insertion. No variation made from these terms.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

New Series. ALBANY, MAY, 1849. **Vol. VI.—No. 5.**

Improvement of the Soil.

Treatment of Sandy Soil—Use of Clay, &c.

Eds. Cultivator—Circumstances have particularly attracted my attention to the nature and cultivation of sandy soils. I am satisfied by observation and experience, that a very false and mistaken system of tillage has been adopted upon these lands, and that there prevails an inadequate appreciation of their value and productiveness. The preliminary processes, by which they are in popular language subdued, and adapted to profitable culture, are somewhat tedious and expensive.

The leaves, foliage, and other deciduous particles, that fall from the pine trees which ordinarily occupy these lands in their primitive state, must be first destroyed. These substances are most noxious and destructive to vegetation, and scarcely no useful plant can be cultivated, while they exist to any extent upon the surface of the soil. This work, should be, and usually is effectually accomplished by the burning, which succeeds the first clearing. A fire that burns over the whole surface successfully purges the soil from this obnoxious influence. Where the earth by this process is well prepared for the drag, a valuable crop of rye or oats may be obtained, which will prove an ample remuneration for the subsequent labor and expenses to which I shall refer. If the burning has not effected this result, the farmer must be contented with light crops, and scanty and coarse grasses, until the decay of the roots and stumps, (which is a rapid process with the pines,) enables him to accomplish the object by the plow and hoe. The first clearing is succeeded by a growth of sweet fern, brakes and other worthless plants, by which every valuable vegetable is choked, and ultimately extirpated. This vegetation, we term the sour growth. It is only eradicated by repeated, close and careful plowing and dragging, or what is more efficient still, by the thorough use of the hoe. Sheep and cattle pastured upon the land, have no effect upon this noxious vegetation. They all reject it, and refuse to brouse it. Any effort to successfully cultivate with grain or grass, the soil in its presence will lead to idle expense and incur certain disappointment. Until freed from those substances, the land cannot even advantageously be laid down to pasture. Two, and often three efficient plowings are necessary to produce this result. It is not requisite, however, that the plowings should occupy an equal number of years. Repeated use of the plow, is often highly advantageous in the same season.

Nor is the labor and expense of these plowings without beneficial consequence in other respects. The process, if performed at the proper period, at each recurrence, turns under and covers a rank growth of green and juicy vegetable matter, which rapidly decaying, yields to the soil a most fertilising manure. This vegetable substance, when decomposed, becomes incorporated with the sand, imparting new and improved qualities to the land, and forming by the combination, a new element of soil. A farmer, ignorant of these facts, or disregarding them, may be impatent, under this protracted system, and in prematurely forcing the land, often incurs a loss of his toil and money, and will impute to the soil a failure chargeable to his own improvidence.

When, by these operations, the land is sufficiently ameliorated and relieved from this "sourness," it should be well seeded prncipally with clover. In this condition, it is formed for successful tillage. White clover is indigenous to the soil, and springing up spontaneously, yields a rich and beautiful profusion of herbage. A heavy and vigorous turf is thus soon formed. The land is then adapted to the profitable culture of almost every crop. A tenacious sward, plowed under, gives to the soil a firmness and consistency, that adapts it to the application of manures, and renders their effect more powerful and permanent. The decaying turf constitutes a basis, upon which such appliances as plaster, ashes and lime will vigorously act, and produce large crops of corn, potatoes, or the smaller grains.

My observation has confirmed the opinion, that, by a judicious rotation in culture, sandy soils may be continued without the application of manures, in a constantly progressive state of improvement. Instead of exhausting, tillage tends to its amelioration. The most successful system in my experience is this. Turn under a clover ley, plant upon it, with plaster, after a sufficient harrowing, but without disturbing the sward The second year, carefully seed with clover and herds grass. Let it remain for two or three seasons in grass and then again pursue the same practice. If permitted to remain too long in grass, the land becomes gradually infested with a wild and worthless vegetation.

I will briefly suggest some of the reasons upon which I found my estimate of the advantages of cultivating sandy soils. They may be tilled with an immense saving of labor and expense. A team can plow in the same time, two acres, with less labor and wear, than one acre of stiff or hard land. An equal economy of time and toil, will be observed in every subsequent process, in the tillage of the crop. This is the case when the work is performed by manual labor. The difference in the relative expense of cultivation, is greatly enhanced in favor of the sandy soil, by the use of labor saving machines. In forming a judgment on this subject, this fact should be regarded as of most prominent consequence, for these lands are admirably adapted to the use of the corn planter, horse hoe, and cultivator. Grain grown upon sandy soil, is proverbially well ripened and heavy in weight. Potatoes raised on it, are uniformly, I believe, exempt from disease, and always of the choicest quality. It is less affected by drouth than many other varieties of land. I impute this fact to its being peculiarly pervious to moisture, from its loose and detached particles, which renders it more readily affected by the slight showers and copious dews of summer.

It is well calculated for pasturage. The delicate white clover, which I have described as a natural product of this land, affords the richest and most nutricious pasture. Sheep will thrive and grow fat on a sandy pasture, where a casual observer would doubt that they could find the most scanty sustenance. Sand is ready for cultivation as soon as the frost is out, and crops are growing upon it, when heavier lands still lie unprepared for the plow.

Permit me for a few moments, to occupy your columns in exhibiting a fact or two, which illustrates the advantage of combining clay with sand, and throw, I think, some light on the great question of the nature and causes of the potato rot. I planted in the year 1847, a ten acre field of sandy land to corn, with no application of manure except plaster and ashes, in the hill and upon the plant. Nearly the whole field yielded me a rich harvest. About twenty years before, my father had spread forty loads of clay on three-fourths of an acre, in no respect superior to the remainder of the lot. Upon that three-quarters of an acre, from the first appearance of the shoots to the harvest, the difference in the aspect of the crops was so marked and peculiar, as to attract universal observation, and constant inquiry as to the cause. The plants throughout the season, presented a higher and better color, a more luxuriant growth, and in the end, a much heavier yield, than any other section of the lot. The strength of any other manure, would long before have been exhausted, or its effect lost by leeching or evaporation. The clay combining with the sand, had constituted a new and distinct soil, improved over both its components in fertility, and permanent in its character.

On one side of the field of corn I planted two rows of potatoes, perhaps a hundred rods in length. When dug, they proved sound and free from disease, except across the piece where the clay had been deposited. Here the rot exhibited itself, and had seriously affected the crop. The seed was precisely similar, and the earth in every particular the same, except as it had been changed or modified by the incorporation of the clay with the sand. Can philosophy form any other deduction from these facts, than the conclusion of common sense, that the clay caused the development of the disease in that portion of the crop. It may have caused the development, without being itself the origin of the disease. W. C. W. *Port Kent*, *Jan*. 1849.

NOTE.—Although potatoes have generally suffered less from the rot on sandy soils, than on those of tenacious character, they have not been wholly exempt in the former case. As to the quality of potatoes produced on sandy soil, we think they are not usually as good as those grown on a friable loam. EDS.

Fertilizing Properties of Salt.

EDS. CULTIVATOR—There is a discrepancy of opinion among those who have used this article as a manure. While some are loud in its praise, and attribute to it astonishing effects, others are equally vehement in its denunciation—asserting that it is incapable of producing any benefit. From these contradictory accounts, we may reasonably conclude that, under some circumstances, it acts beneficially, and under others does not. But *what are these circumstances?* This is an important question, and one which I shall not attempt to answer fully—my chief object being to advance a few remarks which may tend to call attention to the subject, and lead to further investigation.

One of the circumstances under which salt has been found to be productive of *no* benefit is, when it has been used on land situated near the sea. This is easily accounted for when we consider that the vapor which rises from the salt water is impregnated with this substance, and wafted over the land until it becomes condensed, when it is precipitated to the earth in the form of rain. Thus, land bordering on the sea, is kept well supplied with salt, so that the application of an additional quantity would not be likely to produce any beneficial effect.

But *why do its effects vary when it is used on land lying beyond the reach of sea vapor?* I suppose the principal reason is, because some lands naturally contain more of this ingredient (or its constituents) than others. We may therefore always expect most advantage from the use of salt on such soils as have not received a very bountiful supply from the hand of nature, or such as have been exhausted of the constituents of this article by the continued cultivation of such crops as require a large amount of them.

As regards the manner in which salt acts in promoting the growth of any vegetable, I hardly think we are warranted in giving it credit for so many modes of doing good as some have imputed to it. One writer says, "its benefits are as follows: 1st. When used in small quantities it promotes putrefaction. 2d. By destroying grubs and weeds. 3d. As a constituent or direct food. 4th. As a stimulant to the absorbent vessels. 5th. By preventing injury from sudden transitions of temperature. 6th. By keeping the soil moist." The *third* reason here given appears to me to be the most important one. True, salt may "destroy grubs and weeds," but in order to obtain this advantage, would it not be necessary to apply so large a quantity as to be ruinous to any crop we might wish to raise? In this case, the remedy would be worse than the disease. As regards its "promoting putrefaction,"—"stimulating the absorbent vessels"—"preventing injury from sudden transitions," and "keeping the soil moist," these are points which need better evidence than mere assertion.

That salt may be of much advantage by furnishing food to plants, appears very probable when we consider that all our common cultivated plants require for their nourishment, a portion of its constituents. These constituents are *sodium* and *chlorine*. Although these ingredients form but a small part of the bulk of any vegetable, yet they are absolutely necessary, and if the soil does not contain them, our crops cannot thrive, although all other circumstances are favorable. Therefore, when our land has become exhausted of these ingredients, and possesses all other requisites for sustaining a luxuriant growth, a wonderful effect may be expected from the application of salt.

Another circumstance which tends to confirm the position here assumed, (that its chief benefit consists in supplying food,) is, that it has been found by experiment to act most advantageously on such plants as contain, according to accurate analysis, the largest amount of one or both of these constituents (sodium and chlorine.)

One of my neighbors says he has frequently tried the experiment of rolling his potatoes in fine salt before planting them, (having first moistened them with water,) and has invariably found those thus treated to grow more vigorously than those not salted; the vines of the former, he says, are of a darker color, and continue green and growing much longer than the latter, and the yield is always in favor of those to which the salt was applied. He supposes salt to be a certain preventive of *rot*. I would like to know whether any one who has applied this article to his potato crop, has had his potatoes injured or destroyed by the mysterious disease.* I have read in agricultural journals several accounts mentioning that potatoes to which salt had been applied, had escaped the disease, while those by the side of them which had received no salt had been destroyed. I have never made any experiments with this article, though I design doing so the coming season.

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* There have been numerous accounts, several of which have been published in The Cultivator, of salt having been applied in various forms to the potato crop, with no effect to prevent the rot or "disease." In respect to the effects of salt as a *manure*, statements are contradictory, and more accurate experiments are necessary. EDS.

The best and safest way of applying salt, I suppose to be to scatter it over the ground broadcast after plowing and before harrowing, at the rate of from three to five bushels per acre. Some recommend double this quantity. The experiment is easily made, and the expense of trying it on a small scale is trifling. I hope the merits of this fertilizer may be more fully tested. If the application of three or four bushels to the acre does no good, I think we can safely say of it, as of homœopathic medicine—*it will do no harm.*

Should any one who reads this article, be capable of giving further information on this subject from his own observation or experience, I hope he will do so. J. M'Kinstry. *Greenport, Columbia Co., N. Y, March* 15, 1849.

How to make Manure.

Eds. Cultivator—Perhaps there is no branch of agriculture more open to improvement than that of making and applying manures. Although we occasionally find a farmer who thinks he knows enough without learning anything new, yet the best farmers,—those who have made the most improvement,—tell us they have but just begun to learn. They regard manure-making as an *art* to be *studied;* and are ever ready to learn by reading, by observation, and by experiment.

There is no doubt that farmers in Vermont, will find it for their interest to turn their attention, more generally, to manure-making;—for, whatever may be said of the fertility of other regions, there can be no question but our soil needs manure, and must have manure, or become barren and worthless, as much of it is fast becoming so already.

But the farmer sometimes objects, that it costs so much to make manure, he cannot afford it. This, we think, a mistake, especially where the farmer owns the land he cultivates. The art of manure-making, like the art of house-keeping, consists very much in saving; and there can be no doubt but a large share of the farmers, either for want of information or proper care, suffer one-half their manure to waste. A few months since, we saw, in a neighbor's barn-yard, some half-dozen heaps of green manure, which the owner said he was going to spread over his yard, that it might lie through the summer and *mull.* He was of the opinion that manure was best after it was thoroughly *mulled.* About as good economy as it would be to leave ashes exposed to the weather for a year, and then expect to make soap or potash from them.

Many farmers, if they wished to have as little manure, and that little as weak as possible, could not manage their yards better for that purpose, than they now do. The urine, which is of about the same value as the solid manure, is oftentimes nearly all wasted, and the droppings of the cattle are left scattered about, exposed to the weather, till two loads have hardly the strength of one, and are as much diminished in quantity as in quality.

The barn-yard is often so constructed that the water runs out of it, and in times of rain, perhaps through it, into the road, or some stream near by; and that stream, loaded with juices from the barn-yard, is suffered to run off, when it might, by plowing a few ditches, be turned over the mowings. In one instance, we knew a man, when building a wall on some land he had bought, fill up the places where the water had been accustomed to run through, because he did not want the trouble of ditches, and of having the dirt washed on to his grass. The trouble of ditches and dirt he saved, and, also, the trouble of cutting more than about half the former crop of grass. While such a system of manure-making, or rather *manure wasting* is so common, is it not quite obvious that much may be done by way of improvement, with very little expense?

1. It should be constantly borne in mind, that the most valuable part of the manure, in the farmer's barn-yard, consists of salts that are liable to be washed away by the rains, and of gases, that will evaporate if exposed to the atmosphere; consequently, what manure the farmer has, not designed for immediate use, should be kept heaped up, and if possible, sheltered, so as to protect it from the action of the rains and sun. Is there not a great deal lost by neglecting to do this?

2. If farmers have manure they wish to ferment or *mull,* they can cover it with muck, loam, or something of the kind, so that the gases that escape in fermentation, may not be lost in the atmosphere. And the more surface the manure occupies, the more important it is that it should have a covering or something mixed with it, to prevent the escape of the ammonia.

3. Farmers may save a great deal by fixing their yards, so that the wash will not all run out. Mr. A. is greatly averse to having his yard wet, and to prevent this, he has the middle the highest, so that all the wash, and all the rain that falls into it, run into a little brook just below, and thence, on to his neighbor B.'s mowing, who saves all the wash he can get, by having ditches in all directions. Mr. A. has a clean, dry-yard, and can go through it without dirtying his boots; but his neighbor B., who has his yard constructed differently—like a basin, "right side up with care,"—makes more manure, and raises much heavier crops. Cannot farmers attend to this without much expense?

4. A great deal may be saved by taking care of the cow-yard in the summer. This should always be covered with something to absorb the urine, and the droppings should either be covered up where they are left, with muck or loam kept in heaps about the yard, or be thrown into a heap with the shovel, and then covered, to prevent drying up. It is no exaggeration to say, that when the cow-yard is left without any care, two-thirds of the manure is wasted. Farmers, is not this too much to lose?

5. Much may often be done in turning the wash of roads and buildings upon the mow-lands, by having ditches wherever there is a chance for any wash. Frequently, a few hours work in plowing ditches, would make tons of hay; and with but trifling expense, the whole crop on many acres might be doubled; yet the owners, while they complain of "light crops," and oftentimes are compelled to buy hay to winter out their stock, say they cannot afford to make manure!

6. We not unfrequently see all the soap-suds, and wash from the house thrown into the door-yard, making a mud-hole which breeds swarms of flies, and fills the air with its pestiferous effluvia. In such cases, farmers might profitably save their soap-suds for manure, and as for the *odor,* that of a fragrant bed of flowers would be quite as *agreeable,* as well as more healthy and profitable.

The importance of saving the wash from the house can hardly be too highly estimated. A few years since, a British Agricultural Society, offered a premium for the best method of making compost manure. The successful applicant obtained his method of an Irishman. He examined every potato patch he could find: and in one large field, cultivated by many different families, he found one patch of very luxuriant growth, and more promising than any other. He inquired of the owner whether he did not keep more stock than a cow and pig, but found to his surprise that he kept neither cow nor pig. He had a pit dug, where he threw all the wash from the house, mixing it with straw, turf, scrapings from the road, and whatever he could get that would work into manure. This pit, frequently emptied and re-filled, constituted a little manure factory that produced the best potatoes in Ireland. Farmers, is not here an opportunity for making much manure, with materials that have for a long time been thrown away?

7. Of all sources of manure-making, hogs are the most profitable. Those who have barn-cellars for their hogs to work in, can turn their labor to the best account, but those who have not, may, without expense, have a small yard attached to the hog-pen, and every few days throw in muck, loam, turf, leaves, weeds, or anything of the kind that may be at hand. The hog-yard, to be profitable, should be frequently attended to; when considerably filled, it should be emptied and supplied with new materials. Hogs, if rightly managed, would never be censured for laziness. They have unjustly been accused of this, simply because, like mankind, they will not work, unless they can work in their *own way*. To be sure, when they have "accumulated" a good deal, they like to "retire from business," and become "gentlemen of leisure;" but while in the "vigor of life," they will do a good deal towards "a living," if provided with the means. As they are "fond of new things," they should frequently be supplied with new materials to work upon; and if this is faithfully done, farmers may rest assured, their hogs will dig more money for them than many of the *California gold-diggers* will ever realise. JOHN TUFTS. *Wardsboro,' Vt., Jan.*, 1849.

Sketches of Farms.

Further Sketches of Mr. Phinney's Farming.

EDITORS OF THE CULTIVATOR—In the April and May Nos. of *The Cultivator* for 1848, I gave an account of a visit to Mr. PHINNEY'S farm, at Lexington, Mass., in January previous. In September last, I had the opportunity of observing some of his fine crops,—the result of his mode of operations. And first,

THE ORCHARDS.—The trees in the Baldwin orchard, for productiveness, deep verdure, smoothness of bark, and fine shape and proportions, presented a very remarkable appearance. One could hardly conceive how the trees could possibly bear more fruit. Although many of the limbs were bent nearly to the ground, under the burden of apples, yet not a prop was seen in the orchard,—the horizontal training of the limbs, of which I have before spoken, effectually preventing them from splitting off. Mr. Phinney was expecting to harvest nearly 1000 barrels of the Baldwin apple from this orchard, which he intended to ship for Liverpool, on his own account. The fruit for market is carefully picked from the trees by hand, and immediately put into the barrels, which are stored in a dry cool cellar, built for the purpose, in the orchard, where they remain until a sale is effected. No windfalls are ever suffered to go into the barrels. Hence, his apples command a ready sale, and a much higher price than ordinary apples, put up with less faithfulness and care.

Mr. Phinney formerly had a great many varieties of fruit in this orchard; but quickly perceiving that the Baldwin apple found here by far the most propitious soil, he turned his attention almost exclusively to the cultivation of that variety. He finds that the great point to be considered, *pecuniarily*, in fruit-raising, is,—Of the most approved varieties, which will flourish in greatest perfection, in a given location and soil?—The young sweet-apple orchard is coming into bearing finely, and is a great pet with Mr. Phinney. Here, too, it is found that one or two varieties are worth all the rest for productiveness and profit. The orchard has an eastern slope, the limbs are trained in strict accordance with Mr Phinney's notions, and the trees are very thrifty and vigorous.

CULTIVATION OF CARROTS.—In front of the new house, I noticed a remarkable field of carrots of one acre. The cultivation of the ground had been preparatory to laying it down as a level and permanent grass plat. Twenty loads of compost were spread upon the sward last spring, and turned under to the depth of six inches, and the subsoil plow following in the furrow, loosened the earth ten inches deeper. Twenty loads of compost were then spread on top of the sod furrows, two or three inches of the surface made perfectly fine and mellow with the harrow, and early in June, the seed was sown with a machine, in rows two feet apart. At the time of my visit, the carrots had made most vigorous growth, the tops so completely covering the ground that the eye could not at all distinguish the rows. Knowing well the fact that this crop makes its principal growth of root after the twentieth of September, I will not state the probable amount of bushels to be harvested from this field, as it might sound like a large story. Suffice it to say, that any reasonable man should be satisfied with the like of it. The decomposing sod, underneath, was in time for the carrots; and together with the manure turned under, perfectly sustained the crop, in the latter part of its growth; it also kept the land light and mellow, permitting the roots to penetrate and range about at pleasure. The loosened subsoil invited them still farther below. The white carrot was sown upon this field. Making a good part of its growth above ground, it is the more readily harvested without disturbing the sod; and as Mr. Phinney intended the field for a lawn, he was anxious to preserve the surface level and smooth for receiving the grass-seed.

In my ignorance, I had always supposed, until last season, that old land, as it is called, was the only suitable preparation for growing the carrot. I am now well convinced of my mistake. One of my neighbors last spring sowed a piece of green-sward land on the same day that I sowed a piece of strong fertile old land. The seed for both fields was out of the same lot, and the land thoroughly prepared, in both cases. We frequently compared notes during the progress of our crops, in order to test the merits of a green sward ley for the carrot; and the result was, that my neighbor's crop yielded nearly a third more than mine, while his expense in hoeing and weeding, was one-half less. It seems surprising to me, that the carrot is not more universally raised by our farmers. It is a clean, pretty root to handle; as winter feed, nothing is more grateful to the taste, or promotive of the growth and thrift of cattle and horses; for milch cows, it exceeds any other moss-feed for producing sweet, yellow butter; and if the ground is properly chosen and prepared, it makes a very profitable return for the labor bestowed.

THE GRASS LANDS.—In my former notice of the reclaimed grass-lands, I omitted to speak of the importance of an open space, of 3 or 4 inches square, on the bottom of the drains. If stones of sufficient size are at hand to cover this channel, the rest of the filling may be of small stones, as the water will readily find its way into the open space below. The ten-acre piece of drainage, which I noticed in a former communication, proves a most judicious and profitable investment—the land having given fully three tons per acre, of excellent herd's-grass and red-top hay, the past season. The situation of the field is such as to receive all the surface wash of many acres of highly cultivated land, gently descending towards it, on either side,—the benefits of which are now fully secured and turned to the best account,—which, with an occasional top-dressing of compost manure, will undoubtedly keep the land in produc tive mowing, for an indefinite period of time. Twenty acres of upland mowing, adjoining this field, have given an equally large amount of hay; and the crop, the past season, on both fields, is estimated at 90 tons.

The process of underdraining and bringing into successful cultivation, 20 acres of bog meadow, I have spoken of before. This meadow is now very productive in grass; and judging from the luxuriant appearance of the aftermath, the quality of the hay is good. As the cultivation progresses in age, the meadow becomes more firm and easily passable with loaded teams, and the quality of the produce more valuable. Mr. Phinney has raised on this land, 75 bushels of corn, 500 bushels of potatoes, or from 4 to 5 tons of hay, at a first and second cutting, to the acre; and this, in contrast with the fact that, twenty years ago, it was a perfect quagmire, would seem to show the merits and value of this kind of farming.

As the orchards now occupy so large a portion of the farm, and being kept in constant tillage, afford about all the proportion of hoed crops that is desirable or necessary to raise, Mr. Phinney wishes to keep as much as possible of his remaining tillage-land in productive mowing, in order to furnish hay sufficient for the wintering of his numerous stock of cattle. Consequently, the above-named grass-fields will be permanently kept so, by frequent top-dressings of well-rotted manure; and should the land at any time cease to yield at least 2 tons of hay to the acre, or should the quality of the produce become inferior, it will be turned smoothly over, manured and re-seeded to grass, without other cultivation.

In addition to the large amount of hay which the farm cuts, it also supports 70 head of cattle, through the summer, with green feed, or by soiling them in the barns. All the corn necessary for home consumption is produced on the farm, as well as any quantity of carrots and ruta bagas for the winter-feed of the stock, and a great variety of green vegetables for Boston market.

Manure.—These results have been realised in twenty-five years, by agricultural skill, and a diligent and strict husbandry of every available means, for making manure. The peat from the bog meadow has been analysed by Dr. Jackson, and found to contain 95 parts in 100 of vegetable matter. But this, in its cold and raw state, is unavailable, because its valuable properties are locked up in acids, hurtful to vegetation. It has therefore been placed behind the cattle, in their stalls, and in the hog-pens and cellars, as an absorbent of the liquid and gaseous portions of the manure, which in turn, expel the acidity from the mud,—thus rendering it a principal and valuable resource in the improvement of the farm. As much as two parts of peat, are incorporated with one part of manure; and Mr. Phinnney does not hesitate to pronounce it fully equal in its effects upon all the crops in the rotation, to an equal amount of ordinary farm-yard manure.

Every animal has an opportunity of contributing its full share in the formation of a circulating medium for the farm, by depositing its *manure*-treasures in a *Farm Bank*, well guarded from leakages, or the stealthy pilferings of the atmosphere,—often so dexterously managed, as to rob the unsuspicious and unguarded farmer of un-told treasures, even in broad day-light. It has never been thought advisable to extend, or *sprinkle* the business of this bank over a large territory, exposing it to the risk of heavy losses, both of principal and interest, but large and responsible loans have been made, nearer home. Its redemptions have, therefore, been easily met, by the proceeds of its bills receivable,—the produce sold. The dividends have been large and regular, with "a wide margin" left, for expenses and contingencies.

The Stock.—The imported stock of the Mass. State Society, which is kept on this farm, was looking finely at the time of my visit. All the stock of the farm appeared to be in high health, under the soiling system of feeding; the cows were giving a fine quantity of milk. They have twenty acres of pasture to range upon for exercise and water, a few hours each day. The young animals of the Ayrshire and Devonshire breeds, had made a rapid and vigorous growth in the interval of my visits. These breeds of cattle are highly esteemed by the farmers of Massachusetts, for their hardiness and adaptation to the climate and soil of that State. The introduction and dissemination of this stock, by the State Society, is a wise and praiseworthy movement; and it will be productive of more real wealth, to the farming interest of the commonwealth, than any other appropriation of money the Society has yet made.

The task of redeeming this farm from its worn-out condition, and of removing the stones and other obstacles to good cultivation would have looked too formidable for ordinary farmers to attempt. Not so with Mr. Phinney. He was satisfied that its close vicinity to a large market, and the payments which a naturally willing soil would be encouraged to make on behalf of a generous cultivation, after the obstructions were removed, warranted him in the undertaking. At the end of twenty-five years, he can survey his labors, and the results produced by them, with much pride and pleasure. His grateful soil now gives a large and sure reward for the enterprise, patient industry, and liberal investment, heretofore bestowed.

I apprehend that the contrast between the results of a judicious system of high farming and the ordinary scrub and skin system which too commonly prevails, will always be in favor of the former, in a run of years. Too many of our farmers are opposed to any and all changes of cultivation which look toward the improvement of a worn-out soil, on the ground that *it costs too much.* Trained up in old customs of husbandry,—which might possibly do for a time, while the land was new, and the population thin, they still adhere to those customs, under circumstances entirely different from those which gave them origin. When the undeniable superiority of the different modes of culture, better adapted to *present* circumstances, is held up to view, even in the light of *dollars and cents*, their adoption is still regarded with much suspicion and contempt. Controlled by this blind prejudice, how often do we see them toil on through life, in the old routine, their farms becoming still poorer, each year.

But happily, a spirit of improvement is abroad. Among quite a large class of the old stock farmers, a desire for information in different and better modes of culture, is rapidly obtaining. A large, intelligent and enterprising class have gone to farming, within a few years, from other business, who,—dissatisfied with old and improvident methods,—at once inquire into the principles of an enlightened husbandry, with minds free from traditional prejudices. These two classes are scattered along in every community, and we see that their example is exerting a salutary influence upon our agriculture.

The improvements in farming we now observe, may be principally ascribed to a wide diffusion of the desired information, through the medium of Agricultural Journals. The talented Liebig justly remarks that—"There is no other profession which can be compared in importance with agriculture, for to it belongs the production of food for man and animals; on it depends the welfare and development of the whole human species, the riches of states and all commerce. There is no other profession in which the application of correct principle is productive of more beneficial effects, or is of greater and more decided influence." Great and good influences have already been largely imparted, in combatting and meliorating ancient customs, while the mass to be influenced, were almost impenetrably be-clouded by prejudices in favor of those customs. *Now,* there is a great accession of enlightened and *willing* minds to operate upon. You have then, Messrs. Editors, every encouragement to persevere in your enterprising and noble efforts to disseminate correct and improved principles and methods of husbandry, with the consciousness that you are conferring not only individual, but *national* benefits. F. HOLBROOK. *Brattleboro', Vt., Feb. 7,* 1849.

History of Kentucky Cattle.

Letter from Dr. Martin.

The following is the letter to which we alluded in our March No., embracing the questions we addressed to Mr. SANDERS, and Dr. MARTIN's reply to the same. The letter was originally sent to Mr. S., and was forwarded by him to us. EDS.

DEAR SIR—Your letter of the 25th ult. is just received, and I will try to answer your inquiries. Your first question is,

"1st. What breed, cross, or variety [of cattle] has been found most profitable in your region, for beef; and what for the dairy?"

The improved Short Horns and their crosses are most profitable for beef. They are of large size and fatten easily at any age, so as to come early to maturity, and they carry a large portion of their flesh upon the best parts, and their beef is of an excellent quality. They pay better for food consumed than any other cattle that I have fattened or grazed.

In regard to the milking qualities of the improved Short Horns, there appears to be much diversity of opinion. Some contending that they are the best milkers we have ever had in the country, and others that they are worthless. The truth is that some tribes of Short Horns are remarkable for the quantity of milk they give, and other tribes are equally so for their *small* yield.

I purchased two cows at Col. Powel's sale in 1836. One of them, a cow of the Daisy tribe, was a steady milker, giving from twenty-eight to thirty-two quarts of milk daily. The other was scarcely able to raise her calf. And the qualities of each have been transmitted to their descendants, for several generations. The cows that I imported from England were all fine milkers, and so are their descendants. The cows of those milking tribes are generally thin whilst giving milk, but fatten very quickly when dry. The steers of the milking tribes are equal and generally superior as grazier's stock to the others. Mine have been superior, which I attribute to their having been better nourished by their mothers.

"2d. Which of the breeds imported in 1817, the Long Horns, or Short Horns, have succeeded best?"

There was a close contest for many years between the Long Horns, Short Horns, and Herefords. Each had their advocates, and each produced a stock that was a great improvement as grazing stock, upon the native and Patton stock, (as the old unimproved Short Horns introduced by Mr. Patton, were called.) This contest was kept up until about 1830, when the advocates of the Short Horns became most numerous. The Long Horns and Herefords were gradually bred to Short Horn bulls, until the pure breed of the two former are nearly extinct.

"3d. How do the Long Horns of that importation, [1817] or their descendants, compare with the Patton Long Horns?"

Mr. Patton was one of the original importers in 1783 of two breeds of cattle. They were then called the *milk* and *beef* breed. The milk breed were Short Horns. The beef breed had longer horns; but I have always supposed they were the unimproved Herefords.* I am not aware that there ever was brought to Kentucky, any of the full bred beef breeds, so that my opinion that they were Herefords is based upon the appearance of the half bloods which I have seen. Mr. Patton brought to Kentucky the full bred milk breed and half blood cows of the beef breed. A son of Mr. Patton brought to Kentucky a half blood bull of the beef breed, and Mr. Smith brought also a bull, which was half beef and half milk breed, called *Buzzard.* Mr. Patton's Short Horns were very fine animals. They were fine boned, heavy fleshed, and came early to maturity, and fattened kindly, and were extraordinary milkers. They were much larger than cattle that we had in the state previously. Mr. Patton brought only one cow of this breed, and she had no female descendants. The produce of these fine cattle was very much injured by breeding them to bulls which were descendants of the beef breed, such as Inskeep's *Brindle,* and Smith's *Buzzard.* These cattle produced a large, coarse, big-jointed stock, that came slowly to maturity, difficult to fatten, but when fully grown were of enormous dimensions.

This was the state of things in 1817, when your importation of Short Horns and Long Horns was made. I remember, well, examining the Long Horn bull (*Rising Sun*) soon after Messrs. Cunningham & Co. bought him, and I then thought him the finest animal of the ox kind I had ever seen. His stock was very fine—vastly superior to the coarse stock above described. I sold a cow, (got by *Rising Sun,*) to a butcher who paid me for a thousand pounds, nett meat—a very unusual size for a cow in those days.

"4th. How do the Short Horns, imported in 1817, or their descendants, compare with those that have since been introduced, including those of the Ohio Importing Company?"

The Short Horns of 1817 were fine boned, heavy fleshed animals, that came early to maturity, and fattened much easier than the Patton stock, (especially after the latter had been mixed with the beef breed.) They fattened mostly on the outside, so that they always showed their fat to the best advantage. Their flesh was rather inclined to hardness, which was a considerable drawback upon their excellence.

The *best* of the improved Short Horns, introduced within the last twenty years, have all the good qualities that the stock of 1817 had, and they have these additional advantages:—Their flesh is soft, [tender] and they throw a portion of their fat in among the lean, so as to marble it. The beef is of a better quality and they take on fat much easier. They are as forward at three years old, as the stock of 1817 were at four, or as the Patton stock were at six. But the later importations have had greatly the advantage of the stock of 1817, in having the improvement made by the latter to start with. Some of the finest animals I have ever seen fattened, were a mixture of the two breeds. I think there were some of the importation of 1817 that did not have that hardness of flesh, but they soon became so mixed in their descendants that it was a general characteristic.

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* The terms "beef breed" and "milk breed," seem to have been used to designate varieties of cattle which were respectively distinguished for milk and beef—the particular breeds to which they belonged, not being generally known at that day. The "Patton stock" appears to have been of two different breeds, both of which were obtained by Matthew Patton, from (or through) Mr. Gough, of Maryland, who is said to have been "an importer of British cattle." Those first obtained, are described by Benjamin Harrison, a grandson of Mr. Patton, as long-horns—the cows, he says, had "*very long* horns." In 1795, several years after the cattle just named had been obtained, Mr. Patton, it is said, "procured from the before-mentioned Gough, a bull called *Mars* and heifer called *Venice*" [Venus?]. These are represented as "full blood English cattle," and appear to have been Short Horns. [See Judge Beatty's work on "Practical Agriculture," pp. 33, 34—also, Mr. Harrison's account in the Franklin (Ky.) Farmer," vol. ii. p. 196.] The Mr. Gough alluded to was probably an importer of *various breeds* of "British cattle." In Parkinson's "Treatise on Live Stock," the author of which spent several years in America shortly after the close of the Revolutionary war, Mr. Gough is spoken of as having imported "cattle of the Yorkshire kind." It is added—"they were of the large, coarse sort," and that "they answered very indifferently in America," the poor quality of their flesh rendering them disliked by the butchers. [See "Parkinson on Live Stock," vol. i. p. 108.] We have seen what was called "Patton stock" in the neighborhood of Chillicothe, (O.,) and also in Kentucky. They appeared to be a mixture of long horns and short horns, and (with due deference to Dr. Martin) we did not discover in them any points denoting Hereford blood. EDS.

"5th. If you were now to choose a stock for general grazing purposes, in your state, what breed or breeds would you select from?"

I should have no hesitation in preferring the improved Short Horns, to every other kind of stock that I have ever seen, for grazing in this region of country.

"6th. Give as full a description as you can of the qualities of each breed, as they have been developed with you, embracing remarks on the comparative size, form, activity, hardiness, and tendency to disease of the different breeds."

The original breed of cattle in Kentucky, strongly resembled the old unimproved Devonshire cattle. They were small, thin and difficult to fatten—cows weighing when fat, from three to four hundred pounds. These cows were good milkers, giving a moderate quantity of rich milk. I do not know that they were subject to any other disease but the hollow horn—a disease brought on by poor keep in the winter, so that the pith of the horn is frozen. It was cured by boring a hole in the horn.

The introduction of the Patton stock in 1785 and subsequently, made a considerable improvement in these cattle. Cows of the Patton cross, would weigh when fat from 600 to 700. There was such a general disposition to increase the size, that the coarse-jointed large-boned animals, were selected and saved as breeders, generally, from 1785 to 1817, and the consequence was at the latter period, the Patton stock, (as all these cattle were called,) were very coarse. The size of some of these cattle was enormous; but they did not weigh, nett, near equal to their size. The graziers at that period did not like to attempt to fatten cattle until they were four years old.

The importation of 1817, improved the coarse cattle very much, increasing their disposition to fatten. They came earlier to maturity, were gentler, better disposed, and had much less offal. Whatever reputation the Short Horns acquired in Kentucky, prior to 1830, was owing to this importation of Short Horns, and they had great reputation.

The improved Short Horns introduced within the last twenty years, have been a great improvement upon those imported in 1817, and those of Mr. James Prentice, of Lexington, in 1818. At the last cattle show that we had in Winchester, I showed a three year old steer, a mixture of the stock of 1817 and the improved Short Horns since introduced; and the judges put his weight at 750 lbs. Shortly after the fair, I sold this steer to Mr. Brinegar, who took him to New Orleans, and when butchered, he weighed, nett meat, 1242 lbs. I mention this circumstance to show how much more weight is contained in the same bulk; for if this steer had been of the Patton stock, his bulk would have given about the weight the judges laid him at. A few months before, I had sold to a butcher in Lexington, a steer two years and eight months old, that weighed 1025 lbs. I sold a heifer six years old to B. Roberts, that weighed when driven to Cincinnati 1487 pounds. Last year I sold to Mr. Horn, a five year old heifer that weighed 1116 pounds. Both of these were mixtures of the stock of 1817 and later importations, and the last was uncommonly small for her weight. I regret that this last was not weighed before she was slaughtered, that I might know the difference between her gross and nett weight. However, I can give you the gross and nett weight of a four year old steer sold to the same gentleman. His gross weight was 2000, and his nett weight 1280 lbs. All these nett weights are exclusive of hide and inside tallow, taken out with entrails.

As it regards the diseases of all the above, they are very few, if bred from healthy stock. The most formidable disease of the improved Short Horns with me, has been the milk fever. I lost two of my imported cows, and one that I purchased at Col. Powel's sale, with it. It chiefly attacks cows that are fat, and have their calves in very warm weather—the attack being in a few days after calving. I never knew any but fine milkers to have it, and not until after they have had several calves. The udder becomes very large, hard and hot. They soon appear to lose the use of their hind legs so that they cannot stand. I have cured some by large bleeding and purging freely with Epsom salts. But prevention is still better, which may be generally accomplished by preventing the cows from having calves in warm weather. Healthy parents, generally produce healthy offspring in this region. You are aware that cattle in most of the adjoining states, are diseased, particularly in the liver. These cattle produce a sickly progeny, which seldom look as well as stock from more healthy parents. And I have noticed calves from them to be very subject to bowel complaints.

"7th. What breed of cattle is best for driving long distances?"

This question is more difficult for me to answer than any of the others, as I have very little experience in driving cattle; but I am told by persons who have been engaged in this business, that the Improved Short Horns, when fattened young, do not stand long journeys well. I should suppose from their make that the Herefords would be the best travellers. The Improved Short Horns make excellent oxen, as they never get overburthened with flesh while they have plenty of hard work to do. The breed is more gentle and docile than any others that we have had. Yours respectfully, Sam'l. D. Martin. *Near Colbyville, Ky., Dec.* 4, 1848.

Improved Implements

System, Order, and Economy.

Next in importance to the Plow, Harrow and Cultivator, the Seed Sower may claim rank. Until within a few years, our grain and grass seeds have been sown broadcast by hand; hence we have rarely seen a field of wheat, but the irregularity of such sowing is visible soon after it vegetates. There are many incidents which cause this irregularity, such as the state of the wind, requiring either a high or a low cast; the equal and corresponding motion of the hand and foot; the length of step, &c.; from such like causes we often see fields of grain striped and streaked, or in waves, to a greater or less extent; here too thick, there too thin. The consequence of such carelessness is, the crop is not uniform in its growth and maturity, and less in product than if the seed had been well and equally distributed. To make this more evident, a careful calculating farmer ascertained by trial, that one foot square received of equally distributed grain, about 48 grains: Now ears of wheat may be said to average 65 grains, I have counted as high as 91—and as low as 24—but the above named person allowed in his estimate, that each grain produced only one ear, and every ear only 44 grains—the produce therefore, ought to be *forty-*

four fold—but the largest average produce is but 25 fold—then what becomes of the 19 fold lost? May it not be, that the greater portion is lost by *careless cultivation*, and a portion by insects?

To perform the duty of sowing grain, as it should be done, a man can sow twelve acres in a day—but taking one with another, as laborers present themselves to the farmer, very few know anything of this important duty; consequently, we have called in the aid of machinery, not only to distribute the seed equally and uniformly, but to economise too costly labor. This has been well accomplished by the introduction of Seymour's *Sowing Machine*, by means of which a man can sow 22 acres or more per day; and once for all, when I assert results as facts, without qualification, they are to be received as established by my own practice and experience, for several successive years. Thus, with a sowing machine, we can distribute either grain or grass seeds, with a precision which cannot be accomplished by hand; the quantity per acre may be graduated to a quart. The time gained in the operation, and the labor saved, is a profit to the cautious farmer which he carefully cherishes. Let us examine the matter by figures, and note the results.

The hire of a man and horse for two days, in which time he sowed 44 acres, at a cost of about 4½ cents per acre.	$1 50
If sowed by hand with *equal precision*, a man might sow twelve acres per day, requiring 3⅔ days, at $1 per day,	$3 66

or at a cost of 8½ cents per acre—an allowance of the annual wear and tear of the machine may be made, and we have a saving of about one-half of the expense in favor of the machine. The gain of time is very valuable, and the gain in product is considerable, probably not less than five out of the nineteen fold lost to us, as shown in the experiment before stated. Here we have a field for economy in our farming practice but little known, and commending itself to the serious consideration and scrutiny of every farmer.

These seed sowers are not machines of recent invention; they have been known and used for many years in other countries, and to such perfection have they been carried in England, that a seed sower moving at the rate of two and a-half miles per hour, has covered 54 acres in ten hours; their great breadth however, would not be acceptable to the American farmer.

Among the most efficient of our farm machines is the *Hay rake*, worked by horse power; machines of this character were attempted in England about 65 years ago, but it was reserved for the American farmer to perfect the machine. This rake is so universally used, that it needs no remark to call the attention of the farmer to its economy. Within a few years, a horse rake with iron teeth has been introduced, deserving our attention, for raking our stubbles, and all such grain fields as are harvested without binding into sheaves—it works well also in the hay field, when the teeth are well tempered.

We have reason to know that from the earliest period of history, attempts were made to lessen the severe labors of harvesting grain, but the simple reaping hook, or sickle, maintained its supremacy at all times, and until within the last 70 or 80 years;—nor was it until about the year 1815 that any thing promising success was presented to the farmer. At that date, premiums of $2500 were offered in England, for the production of effective *Reaping Machines*. The premium was not awarded, but credit is due to Mr. Smith, of Deanston, for a machine which, though it was approved and used for several years, was relinquished. In 1837, Mr. Smith improved his reaper, but it was too heavy and cumbrous for general use. The necessity for a reaping machine [illegible] strongly, that the mechanical genius of Great Britain was severely urged for its production, and machines were produced by Mr. Bell and Mr. Mann, at different periods, and each with promise of success. All however were complex and costly; of course not fitted or suitable to general use, and at this day, the sickle and the scythe are extensively used in harvesting in Europe. Here again, it was reserved for American ingenuity to secure success, and I believe the merit is due to Mr. Obed Hussey of Maryland, for the production of the *simplest* and most effective machine for reaping our grains, that has yet been offered. Other ingenious men have invented in this country, reaping machines which perform well, and have been made by one and the same power, to reap and to thresh the grain—these latter, however, are complex, and require a power for their use, beyond the wants or due economy of the New York farmer. The machine used by myself and many of my neighbors for several years, is the plain simple machine of Mr. Hussey, moved by a pair of horses; its simplicity and durability entitle it to our notice; and indeed it would be well, that in all our machinery, these two qualifications were more closely attended to; for unless a machine is *simple* in its contrivance, it is useless to the farmer, and unless *substantially* made, and strongly braced, there is little probability of its continuance over one season. With Hussey's Reaper, we cut from 12 to 17 acres per day—the average work done is 15 acres per day. It requires one person to manage the team and another to throw off the grain:—eight men to bind the sheaves as fast as cut, are kept in active employment; and the machine costs about one hundred dollars. Here we have all that is necessary to show the economy from this labor-saving machine—let us test it by figures. Taking men as we find them offering to labor for us, very few are capable of cradling more than two acres per day in a workmanlike manner, but to make our calculations more exact, we will suppose them equal to cradling two and a-half acres per day. A field of twenty acres in wheat will then require

8 days' cradling at $1.50 per day, is	$12 00
16 days' raking and binding (two binders to each cradle,) at $1,	16 00
	$28 00

Or $1.40 per acre. If an acre yields 20 bushels of wheat, the reaping, binding and shocking, is equal to *seven cents* per bushel. Then, if the field of 20 acres had been reaped by Hussey's Machine, worked at a moderate pace, it would have been finished in 1¼ days.

Therefore, the cost of a team and driver at $1.50 per day, is	$1 88
8 men binding for 1½ days, at $1 per day,	12 00
	$13 88

Or 69 cts. and 4 mills per acre. If the yield, as in the former case, is 20 bushels per acre, then the cost of reaping per bushel, is 3 cents and 4.7 mills; being a gain in favor of the reaper, of about *three and a-half cents per bushel*. The rate of wages may vary in different places, but will not essentially vary the above result. Any farmer can make his calculations from the data set forth, and add a proportion of ten per cent per annum, on the cost of the reaper for its wear and tear, distributing this charge among each of the crops reaped by it; as it reaps equally well, wheat, barley, rye and oats.

I have before me the cost of cultivating, harvesting and preparing 2 different crops of wheat in my neighborhood the past autumn, *ready for market*; the cost of them respectively being 25¼ cents, and 29¾ cents per bushel; a result of system, order and economy not to be accomplished without the machines we have described.

AGRICOLA. *Seneca Co., April*, 1849.

The Veterinary Department.

Hoove in Cattle.

Eds. Cultivator—Allow me to suggest a *quicker* and much easier way of curing an animal hoved on clover. Take a straw band, with a knot in the middle as large as a man's fist, put plenty of tar upon it, and put it in the mouth of the animal, and tie it on top of the head, not too tight—so that she can chew it. Then put two or three table spoonfulls of the tar in the mouth. This will relieve the animal almost instantly. I have cured at least twenty cattle in this simple way, and can cure any one in *fifteen minutes* at most, *with absolute certainty*. If the animal is hooved upon corn or rye chop, [corn or rye coarsely ground, and mixed with cut straw or hay,] I take a pint of lard or half a pound of glauber salts, and drench the bowels with it. I have known several cattle to be cured in this way;—but never had but one of my own foundered,—it was a cow fresh in milk. I gave her lard—she soon got better, but lost her milk, and for a week or two gave but little. She lost all her hair; it came off in great bunches. B. M. Ellis. *Muncy, Lycoming Co., Pa., Jan.* 30, '49.

Stretches in Sheep.

In answer to an inquiry made in our March number, we have received several articles in relation to this disease, the most important portion of which we give as follows:

Mr. J. S. Pettibone, of Manchester, Vt., has lost several sheep by this complaint, and from a *post mortem* examination of most of them, he is convinced that the cause is a stoppage by a part of the small intestines being drawn into itself,—constituting what is called introsusception. He states that all he has examined have presented this appearance. He thinks it difficult to cure, unless taken as soon as it can be perceived from the symptoms exhibited by the sheep—if delayed twelve hours, he says the animal may as well be "killed and put out of its misery." His remedy is, to take a sheep as soon as it appears to be affected, raise it up by the fore legs, and move it up and down; then take it by the hind legs and move it in the same way. Then give it from half to three-fourths of a pound of lard, cut up into pieces of convenient size to put down its throat. Then turns out the sheep and gives it a smart run. This seldom fails to produce a cure. Mr. P. is in doubt as to the *remote* cause of the affection. He thinks it often attacks sheep that are in good condition and apparently healthy.

In support of Mr. Pettibone's views, we may add that the editor of the *Berkshire Culturist* agrees with him as to the cause of stretches, and recommends similar treatment. He states that he has also given for this difficulty, "common squirrel shot"—about an ounce to a sheep; though a smaller quantity will often produce relief. A correspondent of the *Michigan Farmer* states that his remedy is "simply driving about the sheep affected with the disease, so as to exercise them somewhat violently."

Mr. C. W. Hillman, of East Avon, N. Y., writes—"We have had more or less of stretches in our flock for the last fifteen years. We have tried all the usual remedies recommended, with little success, till we tried the following: Take a sharp-pointed pen-knife, and make an incision in the third ridge in the mouth, and start the blood pretty freely. This has proved an effectual cure in every case. As a preventive, I would recommend one tea-cupfull of sulphur mixed with eight quarts of salt. Keep it by them from fall till spring."

Mr. Albert A. Doane, of Middle Granville, N. Y., writes—"We have found in most cases, that bleeding at the ear would give immediate relief. We have used, in some instances with good success, gunpowder and rum, in the proportion of half a gill of rum to two tea spoonfulls of powder. We have also tried a strong decoction of thoroughwort or boneset, made sweet with molasses, say half a pint to a dose; followed by an injection of slippery elm bark. From our experience, we have more confidence in this than in the powder and rum. As we are situated where we cannot get pine or hemlock boughs, we tried as a substitute this winter, pulverised rosin, mixed with salt, sulphur and ashes, and have been very successful in its use."

Scours in Sheep.

Mr. Reed Burritt, of Burdett, N. Y., writes in reference to this disease:—"Late in the fall of 1837, the scours got among my lambs, and I was not able to arrest the disease until some forty of them died. At length a friend recommended rennet, prepared the same as the cheese-maker uses it to set a curd for cheese. I accordingly gave to each lamb that was diseased, about four table spoonfulls, and not one of them failed to recover. We then prepared a quantity sufficient to soak a bushel of oats, and fed them in piece-meals to the remainder of the flock, which consisted of about one hundred, and the disease stopped entirely. I have used no other medicine for that disease to this day, and it has never failed of curing. I keep it on hand the year round; but it is seldom called for excepting in the fall, when the grass is frozen. I have not had more than two or three cases a year since 1837. An old sheep needs six or seven spoonfulls. If they are not relieved in twenty-four hours, I repeat the dose; but it it is very seldom that I have had to repeat it. One thing further I entreat the shepherd to do, for the comfort of the innocent animals; which is to *tugg* them.

I am credibly informed that wheat flour and water, mixed to the thickness of milk, will readily cure scours in human or brute creatures. A piece of opium as large as a common chestnut, dissolved in a pint of good brandy, will cure the scours in a horse. I have never known it to fail."

Mr. Albert A. Doane, of Middle Granville, N. Y., pursues the following course, in reference to scours:—"When the cases are severe, we give pulverised charcoal, about two or three table spoonfulls for a dose. As a preventive (and we believe in the homely proverb, 'an ounce of prevention is worth a pound of cure,') we mix powdered charcoal, sulphur, and ashes with salt, and keep the mixture in some convenient place, where the sheep can get at it at all times."

Spaying Cows and Heifers.

Eds. Cultivator—In answer to your correspondent who asks for information in regard to spaying cows, I would say that I have practiced it for twenty-five years, and think I can judge with tolerable correctness as to the benefits of the operation.

A spayed cow will give more milk in a year than when she went dry thirty, sixty, or ninety days; and she is ready to fatten at any time, and will take on fat much more readily than those cows that are dried and fatted in the usual way. I have followed the practice—(and so did my father before me)—of spaying cows in the spring, and milk them two or three years, or as long as I please—without the trouble that is had with those that are not spayed. When fatted, the quality of the beef is superior to that of any ox or steer, and fetches a higher price in market. In the town or city, where milk is the object, the spayed cow may, as you say, "continue in milk indefinitely as to time."

As to the operation, it is difficult to give such a description on paper, as would enable the farmer to perform it successfully; and so it would be in regard to describing the amputation of a limb, or the dissection of any part of the body. I can only say, that spaying can be performed without any particular risk.

It is important that the farmer should know what his cow is best fitted for. If she is inclined to get fat with good feeding, I would not spay her for the purpose of *milking*, but would do it for the purpose of *fattening* her. But on the other hand, if the object is milk, and the cow is a good milker, spay her and keep her in milk. I have milked them from one to six years; and in the counties of Ontario, Livingston and Genesee, I have operated on hundreds from six weeks to eighteen years old.

Reference can be given to those who have milked spayed cows for several years, have worked spayed heifers, and have raised and fattened them from calves, and all speak in high terms of the benefit of the operation, when well performed. WM. CARTER. *East Bloomfield, Ontario Co., N. Y.*

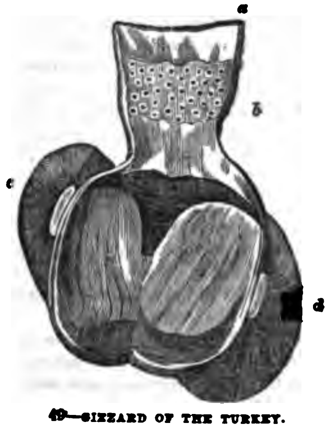
NOTE.—It may be well to add to the above, the conconclusions of M. Morin, veterinary surgeon at one of the French Royal Depots. He furnishes a long article for a French journal, which is summed up as follows:

1. Spaying induces permanency of milk, increase of quantity, and improvement of quality; richer, more buttery, superior color, finer taste and flavor.
2. The most suitable age is six years, and after the third or fourth calf.
3. The spayed cow fattens more easily, and furnishes beef of a better quality.
4. Cows that are bad breeders may be kept as good milkers, and the quality of good cattle kept up. EDS.

The Poultry Yard

Digestive Organs of Fowls.

The great powers of digestion possessed by gallinaceous fowls, have often excited remark; but of the *machinery* by which they are able to grind such hard substances as the haws of thorns, the stones of cherries, and other similar seeds, not much is generally known.



49—GIZZARD OF THE TURKEY.

For this reason, we have thought our readers would be interested with the accompanying cut of the gizzard, and a description of that and other digestive organs of fowls.

The cut, (fig. 49) shows the gizzard of the turkey laid open: *a*. lower portion of the crop; *b*. ventriculus succenturiatus, with its zone of glands; *c*. muscle of the left side of the gizzard; *d*. muscle on the right side.

Various experiments have been made to test the solvent and grinding powers of the gizzard. Without going into detail in describing these experiments—which in many instances appear to have been unwarrantably cruel—it may be useful to mention some of the astonishing results which were produced.

Spallanzani prepared tin tubes, which he filled with grain and forced down the throats of common fowls and turkeys. After twenty to thirty-six hours the birds were killed; the grain had been dissolved, and the tubes broken or distorted in a singular manner. He then strengthened the tubes by soldering plates of tin with small holes through them, to the ends of the tubes. The tubes, when taken from the gizzard of the turkey, were compressed or broken, the ends driven in, and the grain was entirely dissolved. He next tried what effect would be produced by sharp bodies thrown into the gizzard. In twenty-four hours the gizzard of a cock broke off the angles of a piece of rough jagged glass; and no wound or injury appeared on the gizzard. Twelve needles were driven into a ball of lead, the points projecting about a quarter of an inch from the surface; the ball was coated with paper, and forced down the throat of a turkey. It was retained thirty-six hours, the bird showing no uneasiness. When taken from the gizzard, the points of the needles were found broken off close to the surface of the ball. Two of the points were found among the partly digested food—the others were believed to have passed through the intestines. In the next experiment, he fixed twelve small lancets, very sharp both at the points and edges, in a similar ball of lead. He says—"the lancets were such as I use in the dissection of small animals. The ball was given to a turkey cock, and left eight hours in the stomach; at the expiration of which time that organ was opened, but nothing appeared but the naked ball, the twelve lancets having been broken to pieces. I discovered three of them in the large intestines, pointless, and mixed with the excrements; the other nine were missing, and had probably been voided. The stomach [gizzard] was sound and entire as that which had received the needles. Two capons, of which one was subjected to the experiment with the needles, and the other with the lancets, sustained them equally well."

We give from Martin's late Treatise on Poultry, the following description of the digestive organs of fowls:

"The œsophagus or gullet leads into a dilatation called the crop, craw, or *ingluvies*—a large membranous cavity, which lies just before the breast bone, and which receives the food when first swallowed. It is furnished with many mucous and salivary glands, the exudation from which tends to soften the grain, and fit it for further elaboration. This crop or sack is not very sensible, and when gorged with food may be opened by means of a sharp pen-knife or lancet, and relieved of its contents. If the edges of the wound be neatly joined together, and secured by a few stitches—the bird being at first kept fasting, and afterwards only allowed a little sopped bread or the like—it will generally recover without any ill symptoms. To this crop succeeds a narrower portion, called *ventriculus succenturiatus*, the lining membrane of which is beset with numerous glandular orifices, forming a sort of belt, which pour out a copious secretion of digesting or gastric juice, which mingles with the food in the gizzard or grinding stomach, into which the *ventriculus succenturiatus* immediately leads. The gizzard is a powerful grinding mill, composed of immensely thick and firm muscles, and lined with a tough insensible coriaceous membrane. The two massive hemispherical muscles which essentially form the grinding apparatus, are opposed face to face, like two millstones, and they work upon each other, triturating to a pulp the food subjected to their action, and rendering it fit, after being broken down, for the influence of the gastric juice, which, until this takes place, in the case of grain, would have little or no solvent power upon it. To assist in this mill-like operation of the gizzard, granivorous fowls swallow small pebbles or stones—a practice clearly instinctive, and sometimes carried to a greater extent by domestic fowls than would seem necessary. Nevertheless, without a sufficiency of these pebbles (and fowls should never be so kept as to be unable to obtain them,) digestion is suspended, the body derives no nutriment from the food (unless indeed it be pultaceous,) and the bird droops and wastes away."

Mr. M. adds the following from Sir Everard Home's *Comparative Anatomy:*

"When the external form of this organ [the gizzard] is first attentively examined, viewing that side which is anterior in the living bird, and on which the two bellies of the muscle and middle are more distinct, there being no other part to obstruct the view, the belly of the muscle on the left side is seen to be larger than on the right. This appears, on reflection, to be of great advantage in producing the necessary motion; for if the two muscles were of equal strength, they must keep up a greater degree of exertion than is necessary—while in the present case, the principal effect is produced by that of the left side, and a smaller force is used by that on the right to bring the parts back again.

"The two bellies of the muscle, by their alternate action, produce two effects,—the one, a constant friction on the contents of the cavity; the other, a pressure on them. This last arises from a swelling of the muscle inwards, which readily explains all the instances which have been given by Spallanzani and others of the force of the gizzard upon substances introduced into it—a force which is found by their experiments, always to act in an oblique direction. The internal cavity, when opened in this distended state, is found to be of an oval form, the long diameter being in the line of the body; its capacity nearly equal to the size of a pullet's egg; and on the sides there are ridges in the horny coat (lining membrane) in the long direction of the oval.

"When the horny coat is examined in its internal structure, the fibres of which it is formed are not found in a direction perpendicular to the ligamentous substance behind it; but in the upper portion of the cavity they have a direction obliquely upwards.

"From this form of cavity it is evident that no part of the sides are ever intended to be brought in contact, and that the food is triturated by being mixed with hard bodies, and acted on by the powerful muscles which form the gizzard."

Raising Chickens.

Eds. Cultivator—Many persons fail in raising chickens, for want of a little attention to them at this season of the year. Convenient boxes for them to lay and hatch in should now be made. They should be nailed securely in sheltered places, and filled with soft hay. Old boxes should be cleansed, scalded with boiling water, and the bedding renewed. As soon as a hen shows a disposition to sit, 12 or 15 eggs should be given her and a date 21 days in advance, should be marked with chalk in a conspicuous place. Hens should be preferred that have proved themselves good sitters, and that have been successful in raising their broods. The difference between a good and bad hen is worth attention. I have a hen whose long and polished spur proves her six or eight years old, which to my recollection, has hatched her eggs and raised two broods of vigorous chickens every season. A. B. *Setzler's Store, Chester Co., Pa., Jan.,* 1849.

Plant well, if you would reap abundantly.

Domestic Economy, Recipes, &c.

Bread from Sprouted Wheat.

Eds. Cultivator—In your November number, page 354, a correspondent at Granville, Ohio, wishes to know the best mode of making bread from the flour of sprouted wheat. Good bread can be made from such flour, by adding a portion of whiskey, when mixed into dough. The quantity to be ascertained by trial—depending upon how much the wheat is sprouted. No more specific directions can be given, that would be of service; but your correspondent may be sure of as good, light, sweet bread, made from the flour of sprouted wheat, when the proper quantity of whiskey is ascertained and added, as from the best of flour. Wm. A. Tayor. *Grand Rapids, January* 22, 1849.

Substitute for Wringing Clothes.

Eds. Cultivator—In reply to the inquiry, made in your February number, by "D. E." of Meriden, N. H., I would inform him that there is a very simple and efficient substitute for the destructive operation of wringing clothes, known as "Robinson's Drying Machine." One suitable for a private family, say of twelve or fifteen persons, would, with its enclosing case, occupy about the space of an ordinary chest of drawers, and would resemble it in its exterior form. Within this case, are two open or spare boxes, revolving on an axis, into which the clothes are thrown *dripping wet* from the wash tub, whether of linen, cotton or woolen, whether wearing apparel, house linen, blankets, counterpanes, or what not; when by the working of the machine five or six minutes, which requires very little strength, a current of atmospheric air is produced, and a centrifugal pressure created sufficiently to discharge the water so completely from the articles in these boxes, that fifteen minutes exposure to the air renders them fit for the ironing board!

This is what the patentee claimed when showing me the invention; and from the experiment I saw made on some heavy pilot cloth, I could have no doubt of the correctness of his statements.

On further inquiry of those who had it in use, I found it gave universal satisfaction; indeed, the saving to the clothing and the economy in fuel (where drying closets were in use) is so great, that not only large public establishments and private families have adopted them, but laundresses, in the vicinity of cities and large towns are willing to meet the expense of purchasing these machines; and they feel amply paid for the outlay, by the saving they make in time, labor and fuel.

Machines on a large scale are got up for manufacturers, as by its use all kinds of scoured wool, woolen clothes, baizes, flannels, blankets, &c., &c., can be dried in the short space of six minutes, leaving only sufficient moisture to work and finish off the goods. Carpet-makers and calico-printers also find these machines of the greatest value in expediting their work.

In our cold climate where the hanging out of wet clothes with the thermometer at zero is a matter of positive suffering, and the taking of them in, at night, almost a matter of impossibility, I know of no addition to our household comforts that would be so desirable as such a substitute, to say nothing of that fruitful source of family discontent—a rainy washing-day. R. *Butternuts, February,* 15, 1849.

Recipe for Cure of a Cough.

Take of boneset as much as you can grasp in your hand, and two quarts of water; boil it to one quart; add a pint of molasses; let it simmer a few minutes, and then strain and set it by to cool. Take one gill three times a day before eating. It is an excellent remedy. I have several times received great relief by it. H. K. *South Salem, Westchester Co., N. Y.*

Recipe for Making Johnny Cake.

Three tea cups of Indian meal,
One do Wheat flour,
Two do milk,
One do cream,
One egg, one tea spoonful of saleratus and half a teaspoonful of salt. A. FARMER'S DAUGHTER.

Tuscarora Corn.

EDS. CULTIVATOR—In your January number is a short notice of the Tuscarora corn. To prevent its moulding, it should be husked immediately after being harvested, leaving on enough husks to braid it together; after which it should be hung up a few weeks, either in or out of doors, as most convenient. A kind of bread is made of this corn when green, by the Tuscarora Indians. It may be taken off the cob by a coarse grater and made into balls or rolls, which are wrapped in corn leaves and boiled an hour, if the roll is as large as a goose egg. A SUBSCRIBER. *Lewiston, Niagara Co., March* 9, 1849.

Butter Worker.

EDS. CULTIVATOR—As I observed an inquiry addressed to me in the February number of *The Cultivator*, respecting the cost, &c., of a butter worker, I will answer by giving a short description of mine—plain enough if possible, to enable those wanting the article to get one made, (as I did,) by mechanics in their own neighborhood.

The machine is simply a table, the bed of which is a white maple plank, 3 ft. long, by 2 ft. 2 inches wide. A conduit is cut with a gouge half an inch deep, on both sides, and diagonally across the lower end, to a point in the centre, so as readily to carry off all brine and butter-milk. This table is placed upon a strong frame, so constructed that one end is 2 feet 2 inches high, and the other 2 feet 9 inches from the floor to the surface, showing an inclined plane of a little more than two inches to the foot. Above this, and near the centre of the left hand side—(as you stand at the upper end)—is attached a brake by means of an iron shackle, formed of a bolt passing down through the frame of the table, on that side, and secured by a nut, in the lower end of which is an eye. To the lower end of the brake, by means of a bolt entering it endwise, is secured a short shackle with an eye in one end, through which the bolt passes into the brake, and in the lower end is to receive a short link, to attach it to the lower bolt. The whole long enough to let the square edge of the brake lie level across the table. The brake is about 4 feet long, 5 inches wide and 2 inches thick—one edge square and the other round. The lower end worked off and banded, and that part extending over the table, worked into a handle.

The table should be prepared for the reception of the butter, by being thoroughly scalded with hot, and cooled with cold water. With a convenient ladle to turn and handle the butter, and the temperature of 56° or 58°, a man can work 100 lbs. of butter in one hour, which I think the dairy-women will agree with me in saying, is altogether a very great saving of labor. The cost of the brake is about $5. B. A. HALL. *New Lebanon, February* 19, 1849.

Plow deep while sluggards sleep,
And you shall have corn to sell and keep.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Cultivation of Peaches.

EDS. CULTIVATOR—Is it a general fact that the peach will degenerate in quality on being produced from seed?

I had from my agricultural or horticultural reading, derived the opinion that the peach would diminish in quality if a continued reproduction from seed were persisted in. I ever doubted the correctness of that opinion, as indicating imperfection in the arrangement of nature; and of late, I have been led to doubt it still more. Passing through, near the central part of this county, [St. Joseph, Mich.,] I called at the residence of Mr. H. K. Farran, whom I afterwards found to be a very intelligent farmer and fruit grower; and whose fine looking peaches, I thought offered quite an inducement to the cultivation of *taste*. Upon trial, I found them to be delicious. I remarked, that I supposed he had obtained his fruit by budding: he said no, he raised them from pits brought into the county with him; that they had been reproduced *three* times, and had *improved at each successive reproduction*. I alluded to the opinion of eastern cultivators of the peach: "I know," said he, "they believe it degenerates, and perhaps it does on most eastern soils; but here," continued he, "is the home of the peach." He remarked further, that "he had raised fruit every year since his trees began bearing, and that a friend of his near by, had raised large quantities every year for fifteen successive years."

A lady of my acquaintance here, informed me that she planted the pits of some very inferior peaches, and this year, the trees were burdened with the most delicious peaches she ever tasted. I could adduce numerous additional cases, on good authority, where the same results have followed the planting of the seed, or pits. CHAS. BETTS. *Burr Oak Farm, Mich.*, 1849.

We suppose a similar law prevails in the production of peaches from seed, as in the production of other fruits by the same mode. That the degeneracy of a *species* should follow from this mode of propagation, would be contrary to nature. But if we plant seeds of our finest varieties of fruits, it is not to be expected that all the varieties so produced, would be equal to the parent. Experience proves that in raising from seed, the proportion of those kinds which are really *first rate*, is very small. EDS.

Supports for Climbing Plants.

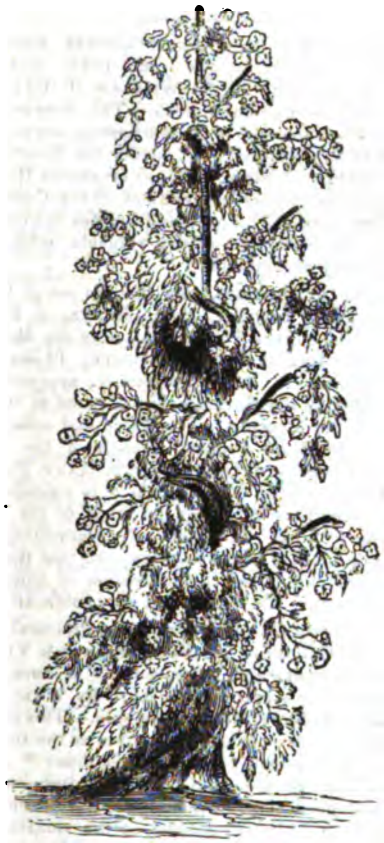
The editor of *The Horticulturist*, gives us in a late number, the following interesting and valuable hints on the supports for honeysuckles and climbing roses, with the first of which we have been long familiar, and have never, in all the highly finished, carved, and painted supports, ever seen its equal:—

"How to make *arbors* and *trellises* is no mystery, though you will do doubt, agree with us, that the less formal and the more rustic the better. But how to manage single specimens of fine climbers, in the lawn or garden, so as to display them to the best advantage, is not quite so clear. Small fanciful frames are pretty, but soon want repairs; and stakes, though ever so stout, will rot off at the bottom, and blow down in high winds, to your great mortification; and that too, perhaps, when your plant is in its very court dress of bud and blossom.

"Now the best mode of treating single vines, when you have not a tree to festoon them upon, is one which many of you will be able to attain easily. It is nothing more than getting from the woods the trunk of a cedar tree, from ten to fifteen feet high, shortening-in all the side branches to within two feet of the trunk, (and still shorter near the top,) and setting it again, as you would a post, two or three feet deep in the ground.*

"Cedar is the best; partly because it will last forever, and partly because the regular disposition of its branches forms naturally a fine trellis for the shoots to fasten upon.

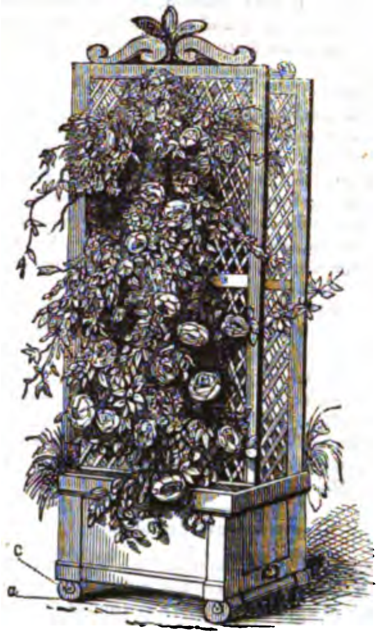
"Plant your favorite climber, whether, rose, wistaria or honeysuckle, at the foot of this tree. It will soon cover it, from top to bottom, with the finest pyramid of verdure. The young shoots will ramble out on its side branches, and when in full bloom, will hang most gracefully or picturesquely from the ends.



51—CLIMBING PLANTS ON CEDAR TRUNKS.

"The advantage of this mode is that, once obtained, your support lasts for fifty years; it is so firm that winds do not blow it down; it presents every side to the kindly influences of the sun and air, and permits every blossom that opens, to be seen by the admiring spectator. How it looks at first, and afterwards, in a complete state, we have endeavored to give you a faint idea in this little sketch.

"What shall those of us do who have neither cottages nor gardens?—who, in short, are confined to a little front and back yard of a town life, and yet who love vines and climbing plants with all our hearts?'



53—MOVEABLE TRELLIS.

"That is a hard case, truly. But, now we think of it, that ingenious and clever *horticulteur*, Monsieur VAN HOUTTE, of Ghent, has contrived the very thing for you.† Here it is. He calls it a 'Trellis Mobile;' and if we mistake not, it will be quite as valuable for the ornament and defence of cities, as the *Garde Mobile* of the Parisians. It is nothing more than a good strong wooden box, upon wooden rollers. The box is about three feet long, and the double trellis may be eight or ten feet high. In this box, the finer sorts of exotic climbers, such as Passion Flowers, Everblooming Roses, Maurandias, Ipomea Learii, and the like, may be grown with a charming effect. Put upon wheels, as this itinerant bower is, it may be transported, as Mr. VAN HOUTTE says, "wherever fancy dictates, and even in the apartments of the house itself." And here, having fairly escorted you back to your apartments, after our long talk about out-door drapery, we leave you to examine the *Trellis Mobile*, and wish you a good morning."

Raule's Jannett or Neverfail.

EDS. CULTIVATOR—*Raule's Jannett*, as described by Mr. Byram, *Horticulturist*, vol. ii. p. 19, as to the growth of the tree and its peculiar habit of late vegetation, is applicable to the *Geniting* that I have been acquainted with for fifty years. His description of the fruit is nearly correct; the flesh is of the color between white and cream; but his drawing of the fruit, p. 18, is erroneous; an irregular shaped Geniting is rarely to be met with.

A nurseryman in Mr. Byram's neighborhood (Mr. Geo. G. Hikes) has in his catalogue *Rawle's Jannett*. Now I suppose these two are looked upon as the same fruit.

The first regular nursery that I have any knowledge of, was established by John Lightfoot, on the south side of the Kentucky river, in what was then Woodford county, (now Anderson.) From this nursery, were drawn the first Genetings that ever came to my knowledge; they were quite popular, both on account of the fineness of the fruit, and their habit of late vegetation. At a later period, Mr. Francis Smith made a nursery near to Byram's station, in Fayette county, Kentucky. Mr. James Munday established a nursery in the same neighborhood; each of these nurseries propagated mainly *Genitings*. This fruit, in the beginning of the present century, was very popular, and has continued so to this day. I have planted, in the course of my life, five orchards. If I had now to plant another, of apples, I would plant forty trees out of every hundred, of Genitings.

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* We owe this hint to Mr. Alfred Smith, of Newport, a most intelligent and successful amateur, in whose garden we first saw fine specimens of this mode of treating climbers.

† *Flore des Serres.*

The impression left on my mind is, that Mr. Lightfoot procured the Genitings from Virginia. Smith's and Munday's came from Lightfoot. From the year 1794, to 1822, I lived in Lexington, Ky. When I removed to where I now live, (then Gallatin county,) in 1823, I planted an orchard of twelve acres; procuring my fruit from Isaac Bledsoe and John Jas. Dufour. The latter was the founder of the Swiss colony, Vevay, Ia., The Genitings were the same that I had been accustomed to see about Lexington, and the same of which I send you a small bundle of grafts by this day's mail.

It seems that *Geniting* is a misnomer; but having used it for fifty years, I am not inclined to change it—certainly it has no quality of early maturity. It may remain on the trees in this climate, without material injury, till the first of December.

Mr. Byram speaks of Yellow or Striped Jannet. I am not acquainted with it. Lewis Sanders. *Grass Hills, Ky., March*, 1849.

Color of Apples.

The following remarks of F. R. Elliott, at the Ohio Fruit Convention, on the difference in the prevailing color of apples in the northern and in the southern part of Ohio, will be interesting to pomologists:

"A visitor to this convention will be struck at once, with the very marked difference between those from the north and south parts of the State. In those from the north, yellow or green is the prevailing color, while red prevails among those from the south. The apple of red exterior, is generally more fair and perfect, when grown at the south, than the yellow or green fruit. At the north, most of our yellow or green apples, have a handsome blush red cheek. this, when the same variety is grown at the south, disappears; and if the trees are upon bottom land or alluvial soil, is supplied by a dark mould or blotch, which presents any thing but an attractive appearance."

Setting Young Trees.

Eds. Cultivator—I have suggested, to those who are setting out young orchards, to dig the holes large, and at least two spades deep, as advised by Downing, J. J. Thomas, and others. I had supposed, however, that it would be of but little benefit on our prairie lands; but A. R. Whitney had occasion to remove two nursery rows of apple trees, that had been set two years, which crossed a spot where there had been a pit for burying potatoes. The trees on the old pit had made three times the wood of those on each side of it, that were similar in every respect when set, and the roots were in proportion.

I would like to know whether crowding the growth of young orchards would not be likely to affect the longevity of the trees. Nathan Whitney. *Franklin Grove, Lee Co., Ill.*

Large Quince Tree.

Eds. Cultivator—There is a quince tree growing on the lands of D. Dutton, in the town of Seneca, which has been carefully measured by myself, in the presence of others, and the result was as follows—girth around the trunk, 6 feet 4¼ inches—heighth of tree, 18 feet, and width across top, 27 ft. 8 in. It bore the past season 10¼ bushels of marketable quinces. The fruit is of tolerable quality, something of the pear-quince variety, but seems to be well adapted to grow the pear upon, as some stocks of the kind, which I budded with the Bartlett, made a growth of over 6 feet the first season, and it increases in size with the pear. The soil which the original tree has grown from, is loam resting upon limestone gravel, which retains a great degree of moisture, and has been manured by wash from the kitchen, and an accumulation of chip dirt to the depth of several inches. I. Hildreth. *Big Stream Point, March* 12, 1849.

Notices of Publications.

Transactions of the Agricultural Societies of Massachusetts, for the year 1848. Collected from the original returns, by William B. Calhoun, Secretary of the Commonwealth.—The returns of all the agricultural societies in Massachusetts, are annually published in an abridged form, under the direction of of the Secretary of State, who has employed Hon. A. W. Dodge, an intelligent farmer of Essex County, to compile the work. This volume furnishes in a convenient form, the substance of the valuable information which is yearly accumulated.

Elements of Agriculture, for the use of Primary and Secondary Schools. By L. Bentz, of France, Director of the Normal Primary School of the Meurthe, and A. J. Chretien De Roville, Professor of Rural Economy in the same school; approved and recommended by the Governmental Council of the Department of the Meurthe. Translated and adapted to the use of the Rural Primary Schools of the United States, by F. G. Skinner. Carey & Hart, Philadelphia.—This is a little manual, which is calculated to be useful to persons beginning the study of the principles of agriculture. It is entirely elementary, and written in a style of great simplicity, so that the matter is brought within the comprehension of children of 12 years of age. We recommend it to public attention.

The Cottage Garden; containing Practical Directions for the Culture of Flowers, Fruits & Vegetables, the Natures and Improvement of Soils, Manures, and their Application, &c. By Walter Elder. Moss & Brother, Philadelphia.—This is a book of over 200 pages, duodecimo, written as the title purports, by "an experienced practical Gardener." The author entertains the idea that previous writers on horticulture and gardening, have addressed themselves too exclusively to "the inhabitants of the *mansion*;" he has concluded, therefore, to take "untrodden ground" by addresssing himself "entirely to the intelligent *cottagers* of America."

"The Farmer's Every-Day Book," is the title of a new book for farmers, now nearly ready for the press, by Rev. John L. Blake, D. D., of New-Jersey. It is to be a large octavo, of over 500 pages, to embrace—1st. The Social Relations of Rural Life; 2d. Theoretic and Practical Agriculture; 3d. Dictionary of Terms, with 500 Receipts relating to Rural and Domestic Economy.

A Practical Treatise on the Management of Fruit Trees; with Descriptive Lists of the most valuable Fruits for General Cultivation; adapted to the Interior of New England. By George Jaques. Erastus N. Tucker, Worcester Mass.—Mr. Jaques has been considerably known for several years, from his interesting contributions to various agricultural and horticultural periodicals, and through the reports of the Worcester County Horticultural Society, of which he is Secretary. He is a judicious practical cultivator of fruits, and has had, besides, extensive opportunies for the acquirement of information on the subject of horticulture. His book appears to have been designed rather as a *manual* than an elaborate treatise; but will be found to contain many useful suggestions.

British and Foreign Medico-Chirurgical Review, or Quarterly Journal of Practical Medicine and Surgery.—We have received the re-publication of this work for January, 1849. Like all the previous numbers, it contains a large amount of matter of great value to the faculty, and interesting to others. Published by **R. & G. S. Wood**, New-York, at three dollars per year.

The Wisconsin Farmer and Northwestern Cultivator, is the title of a monthly periodical published at Racine, Wisconsin, by **Mark Miller**. We have received three numbers of the work, which have been filled with useful matter. Each number contains twenty-four pages octavo, and the terms are fifty cents a year.

The Water-Cure Journal, and Herald of Reform; devoted to the Philosophy and Practice of the Hydropathic System of Curing and Preventing Disease; embracing the true Principles of Health and Longevity. **Joel Shew**, M. D., Editor. The object of this publication is indicated by its title. It is published monthly by **Fowlers & Wells**, New-York, at one dollar a year in advance. Each number contains thirty pages octavo. From the specimens we have seen, we should judge it to be ably conducted.

Answers to Correspondents.

Corn-fodder for Soiling Cows.—J. C. J., Newcastle, Del. The article on the soiling of milch cows, as practiced by **Cheever Newhall**, Esq., of Boston, was published in *The Cultivator* for 1845, pages 22, 23. We are not aware that he has made any change in his plan, but presume he would be willing to answer any questions in regard to the business.

Curing Corn-fodder.—We can hardly say what is the best mode of curing this article, where it is grown purposely for fodder. Without very favorable weather, it is difficult to dry it so that it will neither heat nor sour. Some put it in small bundles, bound near the top, after it has dried for several days, and then put the bundles in small shocks, till so thoroughly dried that the fodder will answer to put in the barn or stack. The objection to this is, that the stalks are apt to cripple down while in the shock, and if the weather is damp, they are liable to rot. Another course is, to dry the stalks for a day or two, and then put them into heaps, and let them heat,—taking care to open the heaps before the heat has reached so high a degree as to injure the quality of the fodder. After the fodder has received a *sweating* of this kind, it dries readily on being exposed to the air, and is not liable to heat again on being stacked.

Draining Tiles.—We have never heard any objection to draining tiles, "where the water comes in at different points along the drains." We presume the water will "find its way in;" but those who have had long experience in the use of tiles can answer, and we should be glad to hear from them.

Rye Grass.—We have but little acquaintance with this grass as a *hay crop*. It has not been much grown in this country. The writer has tried it a little as *pasturage*, for which it seemed to do well. It starts early in the spring, and keeps green late in the fall. In England it is accounted one of the best grasses for hay. It is too early to mix with timothy and red-top, as the stalk would be dead before the others would be in blossom. There are several kinds of rye-grass. The perennial kind, (*Lolium perenne*) is considered good; but a sub-variety of this, called Pacey's rye-grass, is generally preferred. About half a bushel of good seed is the quantity usually sown to the acre.

Name of a Plant.—S. J., Weybridge, Vermont. We do not recognise the plant you wish to know the name of, by your description. If you will send us a specimen of it while in flower, we can probably ascertain its name; or you can probably learn it from some botanist in your vicinity.

Dorking Fowls.—N. B. P., Plymouth, Vt. We do not know of any Dorkings for sale in this vicinity.

Corn-planter.—S. B. H., Providence, R. I. Emery's corn planter can be regulated to drop seeds at any distance, from four inches to six feet. The space between the rows may, of course, be whatever is desired. One man and a boy with a horse, will plant with this machine, from ten to twelve acres of corn in a day This will give you an idea of the "economy."

Rich's Straw Cutter.—We cannot say where this machine is for sale at the present time. It is less rapid in its execution than the cylindrical cutters, and we are not aware that it has any advantage over them.

Disease in Cows' Tongues.—W. R. M., Newport, Herkimer county, N. Y. Some authors speak of inflammation of the tongue, with the formation of vesicles or bladders, as a symptom of *black-leg;* but we have no account of *worms* in the tongue. What appeared to be worms in the case to which you allude, were probably, as you conjecture, inflamed pappillæ. We should prefer giving the animal some cathartic medicine, and bleeding it a little, to "shaving" the tongue.

Hay Press.—M. W. M. Cornwall, C. W. We have taken measures to have a cut and description of one of the best presses, for *The Cultivator*.

Black Alders.—J. M. C., Carlisle, N. Y. Cutting alders in August, for two or three seasons will generally kill them.

Muck.—The muck from alder swamps would improve the fertility of a gravelly soil.

Lead Pipe.—G. A. H., Potsdam, N. Y. The cost per foot would vary, according to the size of the bore. Half-inch would cost four cents per foot—three-fourths inch six cents per foot. It may be had at the Albany Agricultural Warehouse.

Agricultural Societies.

Ohio State Society.—Fair to be held at Cincinnati September 5th, 6th and 7th, under the direction of the Ohio State Board of Agriculture. We understand that premiums are open to competition to citizens of other states. A splendid display will undoubtedly be made of all kinds of live stock, and all products of agriculture.

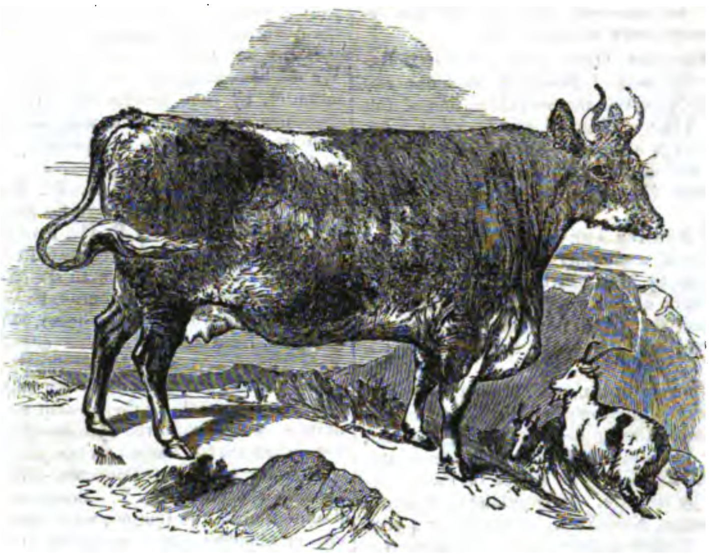
Rensselaer County, N. Y.—Fair at Troy, on the 25th, 26th and 27th days of September. This is one of our most able and influential county societies. The exhibitions are always good, and the officers are making unusual exertions the present season.

Essex County, N. Y.—Fair to be held at Keeseville on the 18th and 19th. Sept. A handsome list of premiums is offered, and we presume a good exhibition will be made.

Onondaga County, N. Y.—Fair at Syracuse, on the 3d, 4th and 5th of October next. We have received a list of the premiums, regulations, &c., which are liberal and judicious.

Windsor County, Vt.—Fair at Windsor, on the 4th and 5th of October next. The premium list is on a liberal scale, and we presume will call out an extensive competition.

Litchfield County, Ct.—Show and Fair at Litchfield, September 26. The shows of this society are always interesting, and from the list of premiums, we presume there will be a good display the present season.



52—KERRY COW.

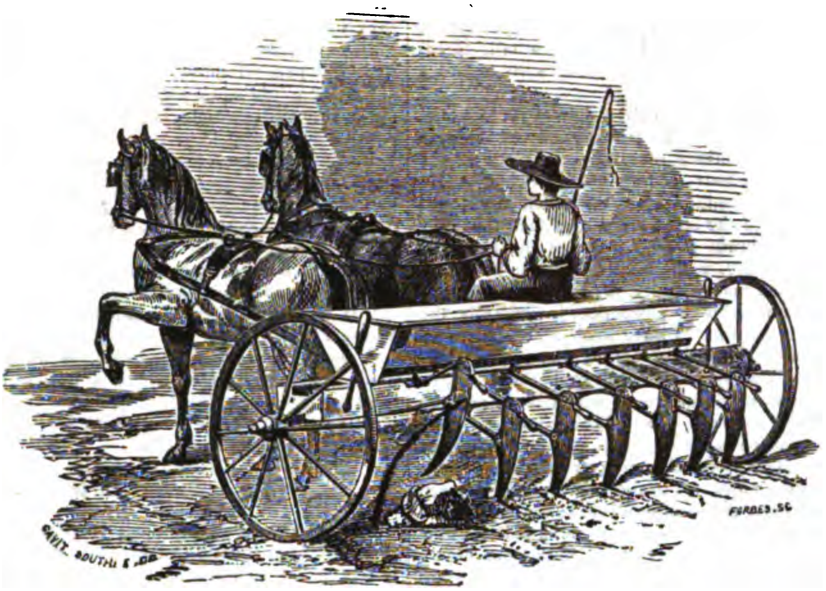
Irish Cattle.

In alluding, in a previous article, to the Irish cattle, we mentioned that there were two distinct stocks in the island, which might be considered indigenous. One of these, inhabiting the mountainous districts, evidently belongs to the race of Middle-Horns; while the other, whose natural habitat is the lower country, as clearly belongs to the division of Long-Horns. Of the former, there are several varieties, but the Kerry breed presents the most marked and distinct characters. In many points it resembles the North Devon; but it is described as shorter in the leg and thicker in the neck, and somewhat heavier in the shoulder. It is of various colors; some are red, others brown, others brindled, and some with white intermingled with these colors. It is a very valuable breed, and is held in high estimation. The animals are very hardy, thrive on indifferent pasturage, and generally find support on their native hills, unsheltered. The cows are excellent for the dairy; and in the celebrated butter districts of Ireland, are preferred to any other breed. Youatt says—"The cow of Kerry is truly a poor man's cow, living every where, hardy, yielding, for her size, abundance of milk of a good quality, and fattening rapidly when required." Our countryman, Mr. Colman, states that he found in Ireland a dairy of five cows of this breed which had yielded an average of 320 pounds each of butter, (actually sold) in a season. The Journal of the Royal Agricultural Society, gives an account of a trial made between three Ayrshire, three Galloway, and three Kerry cows. The Ayrshires gave rather most milk, but the Kerries exceeded them all in butter. The following description of this stock is taken from Rawson's Survey of Kildare: "It [the cow] should have a sweet, placid countenance; a neat, clean horn; head very small; neck very thin at the head, tapering gently and increasing where it meets the shoulder, so as gently to cover it; shoulders flat and thin in the blade; chine not too fine; chest very deep and full at the breast; ribs rising roundly and swelling from the chine; couples close; hip not too wide, and nearly concealed by the high arching of the ribs, and closeness of the couples; hind quarters broad and lengthy, narrowing gradually to the tail, which should be snug between the bones; the quarters on the outside flat, on the inside full, but not extending too low; legs fine and clean in the bone."

We think the Kerry breed would be found very useful in this country; especially for the dairy, in the northern sections, where it is desirable to unite hardiness of constitution with milking properties; and it seems rather singular that among all the breeds which have been imported, this one, which all authorities agree in representing of superior excellence, should have been overlooked.

GOOD COWS.—The cows which received the premiums of the Essex County (Mass.) Ag. Society, last year, gave the following products: The one which took the first premium was six years old—"of mixed breed." from 3d June to 3d July, she gave an average of 18 quarts of milk per day, beer measure, which yielded ten pounds of butter per week. Her feed "common pasture only." The one which took the second premium, gave from April 28th to September 28th, 2,405 quarts of milk. The one which took the third premium, was eight years old, a cross of the Durham breed. She gave from the 27th May to the 25th June, an average of 15½ quarts per day, which yielded a little over two pounds of butter per day—weighed after it had been twice thoroughly worked. In 121 days, her milk gave 192 pounds of butter. Her feed was "good pasture," with 15 quarts of meal during the trial of 30 days. The one which took the fourth premium was nine years old, and gave, in one year, 8767 pounds of milk, —probably about 4,383 quarts—or an average of about 12 quarts per day. The one which took the fifth premium, was eight years old, and afforded 15 pounds of butter in a week, in July last. Her feed "common pasture" and one quart of meal per day. The one which took the sixth premium, gave 2,448 quarts of milk from April 25th to September 26th.

"A SUBSCRIBER," at New South Berlin, N. Y., states that he has practiced running the common plow twice in the same furrow, in order to answer the purpose of subsoiling. This plan is similar in principle to trench plowing, and where the subsoil is rich in the elements which support vegetation, it answers well; but where the subsoil is sterile, it is a better way to loosen it with the subsoil plow, without bringing it to the surface, or deeply covering the top soil.



50—PALMERS' WHEAT DRILL.

Palmer's Wheat Drill.

THIS is a recent invention, designed to combine, in a simple and substantial form, the advantages of the numerous English and American drills. In relation to its construction and operation, we take the following from the description given by the inventor:

"The frame-work consists of a simple axle, four by six inches, and a pole, on the former of which is placed a box or hopper. One simple distributor driven by a cam wheel and friction rollers, conveys the grain from the hopper into the several drills, through hollow braces or levers, and the quantity in each drill cannot vary a spoonful in sowing five bushels. Each drill is independent of the others, and either can pass over a stone or other obstruction eighteen inches high, without interfering with the operation of the other. It will drill perfectly, a strip of land of any width, from four inches to the entire width of the machine, and will work on land of any shape, without wasting the grain. All the teeth or drills can be raised or remain in a position eighteen or twenty inches from the ground, rendering it perfectly safe to drive over the roughest places. By the most simple movement, the distribution of seed can be stopped in an instant, or continued with the same ease. All the injury the drill can sustain by coming in contact with roots or fast stones, is the breaking of a small wooden peg, which is easily replaced. The machine is so contrived, that by a very simple movement, the interior work is exposed to view, and at all times, the grain, while passing into the drills, is in full view of the operator, so that he can detect at a glance, any stoppage of the grain, and at once remedy it."

For further particulars, see advertisement in this number.

SUFFOLK AND MIDDLESEX PIGS.—Mr. WM. STICKNEY, of Boston, informs us that he has lately received from England a boar of the Suffolk breed, and one of the Middlesex breed. These, in addition to his other swine, of the same breeds, will give a very superior stock. The pork of these breeds is much liked at Boston.

The Farmer's Note-Book.

Manufacture of Cheese.

EDS. CULTIVATOR—Having been so frequently addressed by different persons in this and other states upon the subject of dairying, that to reply to each individually, would be quite inconvenient and burthensome, I propose answering some of the most important questions generally asked by new beginners, through the columns of your widely circulated paper,—hoping they will reach every person who deems *book farming* of sufficient importance to take an agricultural paper. At the low rate that such papers are now afforded, those who do not take one, have a poor excuse for begging information of their neighbors, to keep pace with the present tide of improvement.

"What kind of cows are most profitable in a dairy ?"

It depends much upon location. If a dairyman is remote from a good grain market, where the coarser grains would bear a better profit fed to milch cows than to market otherwise, his selection should be of deep milkers, that will bear grain feed without accumulating too much flesh. If near a good beef market, where beef is worth nearly as much per hundred as cheese, look well to the size and thrift of a cow, so that if she is not a deep milker, she will turn well for beef. As a a general rule, those are most profitable that are deep milkers, and will hold out a good flow of milk through the season, keep in good condition, and are quiet and gentle. He who cannot furnish plenty of good feed, should beware of such cows as have been highly fed, or his profits will be small.

"What is the best age of a cow ?"

From five to ten years old. I have no objection to a cow ten years old, for a season. She will consume more feed than a younger one, but her milk is richer till she begins to decline in condition, and lose strength and vigor.

"What is the most congenial feed for cows immediately before and after calving ?"

Plenty of good tender hay or grass, and a small quantity, *daily*, of such other food as is best calculated to loosen the bowels and nourish the system, without creating a fever in the secretive organs. Wheat bran, oat meal, potatoes, or other roots, are deemed best for that purpose. If a cow is in high flesh, a mild bleeding from the neck, with half a pound of salts, fed in a mash, previous to calving, is good.

"What quantity of grain will a cow bear feeding, profitably, and should the kind be varied, at different periods, during the milking season?"

All cows will not bear feeding alike. Some not being deep milkers, would acquire too much flesh, and shrink in milk, with the same amount of feed that others would turn to profit in milk. Hence the necessity of feeding *separately*, with close observation in regard to the constitution and capacity of different cows. A man's observation in his own practice, is generally the best test in this matter. I have long since abandoned the practice of heavy feeding before and immediately after calving. Two quarts of corn or barley meal, or four of oat meal, or six quarts of wheat bran, may be safely fed, daily, to each cow. While kept to hay, grain feed should be made into slop, and fermented before feeding. The profit of feeding grain more, or longer than to bring cows to grass healthy and strong, would depend upon the comparative value of the feed with that of the product. Nothing can be fed to a cow that will increase the quantity of her milk from plenty of good grass. The only gain in feeding slop and grain during flush of feed, is by enriching the milk and retaining the cows' appetite for it when grass fails. When first turned to grass, cows are apt to scour, and shrink in milk. Dry wheat bran, or cob meal, will then be better than slop feed. Barley and corn meal, are too cathartic to feed in large quantities while the cows are at grass.

"Can all dairymen make it profitable to grow corn, sown broadcast or otherwise, to feed to milch cows?"

Where the soil is strong enough to bear a large burthen without manuring too highly, it will bear a profit, as it is the best feed that can be given to keep up the flow of milk between early and fall feed. But where the soil needs much manure, it is not good policy to manure highly a small piece of ground to obtain a large crop of any kind, to the neglect of other important crops. In other words, the dairyman would receive a greater benefit, in a long run, from distributing one hundred loads of manure on ten acres of meadow land, after harvest, or putting on that amount with the seed when stocking down for meadow, than by putting it on one or two acres to grow corn, to feed cows in summer. A small feeding of corn daily, will take the appetite from grass with little or no benefit. I have found it best to feed plentifully at evening only.

"What is the best mode of heating milk and scalding curd?"

That which will produce the most perfect equilibrium of heat through the whole mass, with the least exposure to excess of heat. A smaller vessel containing the milk or curd with whey, set into a larger vessel which contains water, through which heat is conveyed to the vessel containing the milk or whey, is the safest mode, and is now generally practiced here. The more water there is in the larger vessel, the more uniform heat is conveyed to the milk. If a large tin vat is used, set into a wooden box or vat, the tube attached to one end of the tin vat, and extending down through the bottom of the wood vat, to discharge the whey when the curd is sufficiently scalded, should be large enough to let off the whey at once, or the curd will settle or pack together, and require much hard labor, and will waste, by friction, in separating it and making it fine enough to drain and salt properly. A vat for thirty or more cows, should have a tube at least two inches in diameter, and the tin cylinder, with a tube at one end, to fit snug into the tube carrying off the whey, should be as high as the vat, and four or five inches in diameter; with as many very small holes punched in it as can be and hold together, in order to strain the whey from the curd as fast as it will pass off through the tube.

"Why would it not answer as well to pass steam directly into the milk or whey and curd, as it would save expense in fixtures?"

Because that portion coming in contact with steam, would be exposed to an excess of heat, and would not be affected by rennet like other portions which were not overheated. Consequently, a strict affinity would not be maintained, which is necessary for a perfect coherence; and more or less would float off with the whey, or make trouble in curing the cheese.

"Is a thermometer a sufficient guide in making cheese?"

A thermometer *that is correct*, is an indispensable guide in measuring the amount of heat to be used; but the time of raising the heat and continuing its effect, must be varied to meet contingent circumstances. A. L. Fish. (To be continued.)

Improved Picket Fence.

Eds. Cultivator—In many sections of our country, the scarcity of fencing timber is beginning to be severely felt, which makes it necessary to economise our materials to the best advantage.

I am building a field picket fence on a plan which for ornament, cheapness and durability, and the facility with which it may be removed, where the farmer wishes to alter the lines of his fields, may be well recommended in preference to any other wood fence,—requiring only half the number of posts necessary for the common board fence.

In the first place, two benches are prepared about 3 feet high, and placed about eight feet apart, for the purpose of supporting the scantling, while the pickets are being nailed on. Two scantling, sawed two inches by four, twelve or thirteen feet long, are then laid on the benches, where should be fixtures to keep them to their places. A scantling is also laid on for the upper ends of the pickets to rest against while nailing, in order to bring them in line. The pickets are then nailed on with ten-penny nails, two nails to each picket, projecting over the scantling, above and below, about eight inches; the pickets to be sawed in the mill from three to four inches wide, and then cut across into three lengths, if the strips are twelve or thirteen feet long, and for field fence, nailed on with a spacing board of five or six inches.

The posts are then, if for wet land, well sharpened and driven down with a maul. A five-quarter hole is then bored through the post at a suitable height from the ground for the underside of the upper scantling, and a pin of white oak, or other suitable timber, is driven through the post, having a head or projection at the end on the upper side, sufficient to hold the lapped ends of the lengths as they meet on the posts. The lengths of fence prepared as aforesaid, are then taken up, and with a six inch lap, hung or laid on the pins, and a stone rolled against the fence, or a short stake driven down, is sufficient to confine the bottom. In dry ground the posts should be slightly sharpened and set in the usual way.

The advantages of this fence over the common board fence are obvious. Posts in all moist lands, are subject to be raised by frost—some more and some less. In the spring the boards are found more or less split, and the nails broken, without the possibility of re-placing the posts by driving them down; but should the posts of a fence built on the above plan become raised, they can, in the spring, while the ground is soft, be very easily driven down, as the weight of the fence only rests on the pins above described. If the posts should decay and rot off by the ground, they may be replaced by new ones, while the lengths of fence, if constructed of oak, hemlock or chestnut, will last good from fifteen to twenty years. A length is easily removed for the purpose of passing a team, and as easily replaced again.

It must prove a light and convenient fence for swamps and marshy grounds, also for river flats, which are subject to be swept by floods in spring. The lengths being light, may be taken off the hooks in the fall, and be deposited on a bank in a place of safety and readily replaced after the spring freshets. The pickets may be nailed on, and the lengths prepared, before they are taken to the field, and iron hooks may be substituted for wood to good profit. The farmer who procures his material and erects his first fifty lengths of the improved picket fence, will not, if he studies economy, very soon be seen making old fashioned board fence. **David Sill.** *North Argyle, Washington Co., N. Y., March* 29, 1849.

Cement for Cellars.

Eds. Cultivator—What is the best mode of rendering a wet cellar dry, that cannot conveniently be drained? I pounded stone all over the bottom, and then plastered it with water lime, made by R. H. Bangs, Fayettville, N. Y. It was very dry till there came a heavy rain, and then it was full of water, or even with the surface of the ground which is but 18 inches above the bottom of the cellar. It broke the cement, lifted it up, and cracked it in pieces. It seemed to soften when the water came to it, and did not adhere to the stone, on the bottom. I think the lime was not good, or it may be we did not mix it right. How should it be mixed? What proportion of the purest lake sand is to be mixed? Should any quick lime be mixed with it? Is there danger of frost injuring it when *fully set*, when there is no water upon it? Can a cement be made of tar and sand, that will resist the water? We labor under a great disadvantage in this country, for the want of cellars. The land is so level that we cannot dig, because we cannot drain. I was induced to dig one and a-half feet, thinking to stop out the water with water lime, but so far it has failed; and several others in this county, prepared in the same way last summer, failed. Some find fault with the lime, and some think it cannot be done. Have any of your subscribers tried it, and how have they succeeded? Where can the best warranted cement be had?

A good cellar is everything to the farmer, and any method to render them water proof, will be valuable information to any and all of your subscribers here. **A. J. Keeney.** *Erie, Mich., Feb.* 22, 1849.

Turning in Green Crops.

The stage at which crops turned into the soil would be of the greatest value as manure, is a point of considerable importance. Heretofore it has been a common opinion that plants produced the most beneficial results in this respect, when they had attained their greatest bulk and weight, and before there had been any diminution from drying or ripening. Several experiments however, seem to show that where a large bulk of green vegetable matter is placed in the soil, the sap runs into the acetous fermentation—producing an acid injurious to growing crops.

Andrew Nichols, of Danvers, Mass., states to the officers of the Essex County Ag. Society, that he cut a crop of corn fodder in the month of September, and had it carefully buried in the soil by the plow. The result, he says, "was no benefit to the land, the loss of the crop plowed in, and half the crop of corn planted thereon the succeeding year." He accounts for these facts on the following theory: "The stalks had fermented, and been converted chiefly into alcohol and vinegar—the former flying off by evaporation, and the latter uniting with the alkaline or ferruginous earths—forming salts less fertilizing perhaps, than their bases, as they existed in the soil previous to their uniting with the acid."

We have heard of similar results from plowing in green clover, buckwheat and grass. Hence, better effects follow from allowing the crop to become so dry before plowing it in, that the acetous fermentation will not take place. We believe this is the conclusion now held by some of our best farmers who are in the habit of plowing in clover.

Cost of Wire Fence.

Eds. Cultivator—I thought that it possibly might be of service to the farming community, through the pages of *The Cultivator*, to say a few words on wire fence. Much has already been said and done in regard to all kinds of fencing; but I think the wire kind is by far the cheapest as well as most beautiful. I ran a fence, 340 yards, across a 40 acre lot. My object was to make a strong, as well as a cheap fence. The wire I used was No. 9 and No. 7. No. 10 is too small. The fence is five strands high—each strand about 10 inches apart. The fence is five feet high. The expense is as follows:

310 lbs. wire, Nos. 7 and 9, at 8 cents,	$24 80
28 Red Cedar posts, at 12½ cents,	3 50
28 do do small, at 6¼ cents,	1 75
To 3 men 2 days putting up fence, at 50 cts. and found, (say 25 cents a-piece,)	4 50
	$34 55

I placed a small post between every two large ones. The holes in the posts, (5 in each post,) I bored with an inch auger. After the wire was put in and tightened, I drove a plug in, to prevent the rain from rusting the wire. After the fence was up, I took about a pint of *tar*, and with a brush dipped in tar, coated all the wire.

The posts of the fence are 20 feet apart, which I find not too much. **H. V. L.** *Port Penn, Del., March*, 1849.

Cost of Fattening Pork in Massachusetts.

F. Dodge, of Danvers, Mass., states that in the spring of 1848, he bought from a drove, seven shoats, the total weight of which was 925 pounds. The price paid for them was seven cents per pound. They were fed an average of 184 days, and their average gain was 179 pounds of nett pork. The cost of the food they consumed was as follows:

68 bushels corn at 53 cents,	$36 04
30 do do damaged. at 35 cents,	10 50
50 do corn at 65 cents,	32 50
8 do meal, at 65 cents,	5 20
	$84 24
Add first cost of pigs,	64 75
Making a total cost of,	$148 99

The whole quantity of pork afforded by the pigs killed, was 2178 pounds, which was sold at 6½ cents per pound, amounting to $141.57—leaving a balance against the pigs of $7.42. The inference from this statement, is that at the above prices of grain, pork could not be profitably produced at six and a-half cents per pound. But it is suggested that something might be saved by breeding the stock, instead of purchasing shoats at seven cents per pound, live weight. It is thought, however, that the manure afforded by the hogs, would be of sufficient value to more than overbalance any deficiency which might appear in the account by only crediting the pork.

Profitable Cultivation.

The Middlesex (Mass.) Agricultural Society, awarded their first premium on farms to that of GEORGE PIERCE, of West-Cambridge. This farm consists of only forty acres. It is devoted to the cultivation of vegetables and fruits for the Boston market. In addition to the ordinary articles of the kitchen garden, it is mentioned that about three acres of ground are devoted to *dandelions*, which it is said "afford a rich return for the labor and expense of cultivation." A large portion of the farm produces three crops in a season—"first, radishes and early peas—second, potatoes and cucumbers—and next, celery, cabbages, &c. The following is the statement of the expenses and the value of the produce, as given to the committee who examined the farm:

Hands employed from April to October, at an average of $16 per month,	$672 00
Labor paid by the day,	80 00
Board of men at $10 per month,	420 00
Night soil from ten vaults,	30 00
Manure from one stable in Boston,	400 00
Teaming the same,	300 00
Manure from one stable in Charlestown, the produce of 44 horses, at $10 per horse, delivered on the farm,	440 00
Manure from Porter's stable in Cambridge, 30 cords at $5.50 per cord,	165 00
	$2,507 00
Proceeds of sales from March 3d to September 23d, as rendered by the market men, of which a daily account is kept,	$4,544 79
	$2,037 79

Showing a balance of $2,037.79 in favor of the farm, exclusive of the crops on the land on the 23d of September, which the committee say, are "probably worth as much more."

Successful Cultivation.

EDS. CULTIVATOR—Twenty-nine years ago, my father came to this place and bought 76 acres of land on credit, with not a stick chopped on it. He has cleared and fenced about sixty acres with his own hands, and has built a good house, barn and out buildings, and cleared himself from all incumbrance.

When I sent for the first *Cultivator*, my father thought I had better keep my dollar. When the year was out, he said if I sent again, he would send also, and since then we have read your valuable paper with interest, and I trust with profit.

Fruit being my favorite crop, and having a good location, I have tried it a little. The last two years, I followed *The Cultivator* as far as it went, and then I got Downing's Fruits and Fruit Trees of America. I have had excellent success in the raising of trees, shrubs, bushes, vines, &c. I have now growing, 47 varieties of peaches, 16 of apples, 22 of plums, 7 of cherries, 7 of apricots, 3 of quinces, 5 of currants, 3 of gooseberries, 7 of grapes. A good many of these varieties are on trial to test their qualities in this climate. The soil on which my trees grow is a strong clay loam. I have a patch of 90 seedling peach trees, six years old, three years in bearing. The fruit has been tried with budded peaches from Cleveland, and pronounced equal in size, and superior in flavor. The cause I suppose, is in the soil. The soil of Cleveland is clear sand, mine is strong yellow clay loam. I intend to settle the question another year whether the soil has any effect on the flavor of the peach. Downing states that peach trees should be shortened-in half of their growth. I only cut about one-third, as my trees are very thrifty. If I cut more, they make too great a growth of wood. Some of them have produced limbs five feet long the past season.

In conclusion, I would say that with all my trees, and bushes and flowers, I can get time to read *The Cultivator*. I am frequently asked—"what makes your trees so thrifty—how do you keep them so straight? I can't make mine grow so?" My answer is, I take THE CULTIVATOR.

In June last, I whitewashed all our out houses, according to the receipt in vol. ii. p. 291 of *The Cultivator*. A great many have asked for a receipt, which I give, at the same time taking occasion to remark, that if they would take *The Cultivator* they would get all of these things gratis. SELDEN H. REED. *Vienna, Trumbull Co., Ohio, Jan.*, 1849.

Advantages of Railroads to Farmers.

There has been bought at this place, by men from New York and Boston, from Nov. 18, 1848, to Jan. 18, 1849, two months, 4398 dressed hogs, weighing 1,139,522 pounds—making 56 tons, 1,522 lbs., which at the average price of $5 per hundred pounds, amounts to the sum of $56,966.10. They have also bought 15 tons of poultry, at seven cents a pound,—making $2,100 paid for this article. This shows a gross amount paid out in this city, by eastern men, of $59,066.10, for articles produced in this county. This arises from allowing the railroad to carry freight. There is about 300 head feeding here for the eastern market. This pork, beef and poultry business will continue to increase from year to year—there is no knowing to what extent. JOHN B. DILL. *Auburn, N. Y., Jan.*, 1849.

Information Wanted.

EDS. CULTIVATOR—We frequently see it stated in northern papers that free labor is more profitable than slave, and that if southern people were to liberate their slaves they would be more prosperous and happy. As happiness and prosperity are objects which most of us wish to attain, I write to elicit information upon the subject, from some of your numerous and intelligent contributors who use free labor; which would not only be acceptable to myself, but to most southern agriculturists. I will state my own case, with some inquiries which I hope will be answered, and such other information may be given on the subject as may suggest itself.

I hold about 1200 acres of land, two-thirds of which is cleared and arable, the balance in timber. About one-half of the cleared land is in good heart; the other quite thin, but affords grazing for sheep. The land is well adapted to corn, oats, grass, and with a *favorable* season, produces good wheat. It is sufficiently undulating, with upwards of 100 acres of low grounds, most of which is good meadow land.

I have between 60 and 70 persons to support, *most* of whom are slaves, and about two-thirds of them too young to support themselves; consequently, the other third has to support them and do all the work of the farm. My expenses are about $2,000 per year; my income but little more; with a great deal of trouble, vexation and solicitude on account of my dependants. For my duty, as well as my inclination and interest, require that they should be well clothed and fed, and have proper attendance in sickness, which must necessarily cause much trouble and anxiety.

Now, if it can be proved to me that my condition as well as theirs, is to be benefited by getting rid of them, in the name of common sense, I ask who would hesitate? Is it not the dictate of wisdom, of interest, of every consideration, yes, of humanity itself? But how is this to be accomplished without greatly diminishing my income, which is now scarcely sufficient to support a growing family? I will not dispose of any of my lands. How am I to obtain labor to keep up about 15 miles of fencing, and to cultivate or graze my farm to advantage? How many hands would be required? Would grazing stock for market, or cheese-making be most profitable. At what price could the services of a northern man be obtained, who understands this business, to conduct it? And what would be the cost of the necessary fixtures, house, &c. for a cheese dairy? Any other information that the subject may suggest will be thankfully received. A SOUTHERNER. *Barboursville, Va., March*, 1849.

Sheep and Wool.

These have been at the lowest ebb for two or three years past. But a change is commencing, and these are having a steady, upright tendency—at least so it would seem. Some say it is only a mere spasm—that there is no real life in these staples—that they are dead—that wool-growing is so unprofitable that it must be abandoned—or driven to those portions of the country where wool may be grown at little cost. Within the past two years, it is thought that 1,000,000 of sheep have been killed in Vermont for their pelts and tallow. Some portions of that wool-growing state are now almost destitute of sheep, and dairies appear in their stead. So of the Western Reserve in Ohio. So of many other portions of the country.

Now what is the truth on this subject? Will some of your subscribers give us their views? Shall I be able to determine how to employ a little spare capital as a farmer? Shall I invest in sheep or in cows? and will some one inform me, what the north and east are to rely on? Can northern farmers grow wool profitably?—Or is there greater profit to be derived from dairy products. My opinion is not made up on the subject. Certain it is that wool-growing has been profitable. It is equally certain that it has been a poor business—and now, another change is taking place. Many a man wishes to know what to do. Will some one tell us? L. B. G.

Lime and Charcoal for Potatoes.

EDS. CULTIVATOR—I send you the following experiment, showing the comparative effect of powdered charcoal and lime in raising potatoes, &c.

May 10, 1848—I planted Early Scarcity potatoes, in drills, three feet apart, made with a common plow. I scattered a moderate quantity of well rotted manure in all the drills. I then took seven rows for experiment, which was as follows: On the 24th August, I measured off 30 feet of each row, parallel to each other, and weighed the product of each, which I give below:

Row.		*Weight.*
1.	A sprinkling of lime on the seed,	26½ lbs.
2.	No lime or charcoal,	30
3.	A dressing of powdered charcoal,	34
4.	do do	35
5.	do lime,	33¼
6.	do do	32¾
7.	do powdered charcoal,	35½

The result shows that charcoal dust, in every case, gave a larger yield than lime, but does not prove that lime was of any advantage to the crop, although not conclusive, as there was but one row without lime or charcoal. The experiment does not show any extraordinary effect of the charcoal; but I am of the opinion that the effect of this fertilizer will be more enduring than any other manure, and on that account I consider it valuable. The charcoal I get from a forge near by, it being the dust remaining about the coal-house. The soil on which the trial was made was a sandy loam. All the tubers were sound, although the vines were slightly effected with the prevailing disease.

It is my practice to dig my potatoes early, and if possible in good weather, and spread them in a dry, cool, and airy outhouse, where they remain until it is necessary to protect them from frost, when they are removed to the cellar. When treated in this manner, I have never had any rot in my cellar. One of my neighbors dug his potatoes about the same time that I did; he had no rot in the field, and put them directly into his cellar in good order. Early in January he told me that he had lost nearly all, by the dry rot. Many others have lost more or less potatoes by rotting in the cellar. I think my way of digging early, and putting into the cellar late, after the weather has become cold, will ensure their safety. JOHN W. BAILEY. *Plattsburgh, N. Y., February*, 1849.

Importance of a Good Market.

To the farmer, a good market is next in importance to good cultivation, and you may think it of sufficient importance to your readers to note the change the construction of the New-York and Erie Railroad is now making, and destined to effect, in the kind of produce and manner of marketing, for a large portion of this State.

That road was open to Binghamton the fore part of the past winter; its first visible effect upon the price and new demand created in this section, was noticed by a large collection of turkeys, geese and chickens, made by a man from the east, an advance of twenty-five cts. per pair on turkeys. They were carried some sixty miles to Binghamton, and taken through alive. Large quantities of fresh pork have passed here from Steuben, Yates and Ontario counties, for New York by that road, as also, butter, lard, &c. Fat cattle have been bought in this region, and sent through on the road. The Hon. A. B. Dickinson, of Steuben, alone sends thirty head each week. Fat sheep are now being collected near here, to be sent by railroad.

Now all this appears new to us, and we discover that our whole system of doing business is to be changed, as well our overplus material, as our route and manner of reaching market.

Heretofore, about the only articles we sent to the sea board, were cattle, mostly lean, driven over a long road. Driving would reduce the flesh, if the cattle were good beef when started. Wheat, butter and wool, were sent only during the season of canal navigation.

The Erie road will be completed to Elmira in November next, and the Chemung road, to Seneca lake, which will not only give the southern tier the advantages of a new and quick market, but open a new channel for the large surplus products of the lake country.

I here predict that the city of New York will find, when it has this fertile region, the Lake Country in Western New York, to supply her market and tables during winter, that its capacity to furnish, far exceeds any section heretofore accessible.

Heretofore, our fat cattle and sheep, pigs, poultry, eggs, fresh butter, fruit, &c., have been low, compared with the price in New York. This new avenue to market will equalize prices. In marketing our pork, heavy hogs would command the highest price per pound; now the young and light, to consume fresh, are most valuable, while they cost less; because fed led less grain. Heretofore, we have kept our steers three and four years—sent them east, where the farmers have fed them six to ten months, and realised, by being near market, as much as we. After this, we shall put on the flesh ourselves, and realise more nearly the city price.

This road will open a fine field for those disposed to cultivate fruit for market. The soil and climate about these lakes, will unquestionably produce as fine, if not better fruit, than any other part of the state. It is also less liable to be cut off by frost. Much farming land has changed hands at an advanced price, during this winter, within eight or ten miles of this new thoroughfare. These improvements will enhance the value of the land through which they pass, for capital must pay a higher per centage in the interior, at present prices, than near the city.

Before the Erie canal was built, the farmers east, depended upon selling rye and corn, and feared the introduction of western wheat would ruin them; but instead of being injured, they bought their own bread, and made more money than before by selling beef, butter, eggs, &c. E. C. FROST. *Seneca Lake Highland Nurseries, Catharine, March*, 1849.

Weaning Calves.

EDS. CULTIVATOR—The practice of weaning calves, which has been handed down from time immemorial, by separating them from their mothers, is almost invariably attended with a vast deal of *bellowing*, by both cow and calf; and not unfrequently it is the case, that calves, in a very thrifty condition, when taken from the cow, refuse to eat a morsel of grass,—but keep up an incessant bellowing, and continue to pine away until they can scarcely make a loud noise, or move about. I have seen calves, many times, taken from their mothers in full flesh, and growing rapidly, and immediately stop growing, become poor, and very much *emaciated*, simply because the proper course is not pursued, with regard to so important a branch of cattle husbandry.

If such a course of management were denounced as not only *unwise*, but exceedingly detrimental to young animals, "*and as a relic of barbarism*," it might be done, in our humble opinion, without any apprehensions of incurring the odium of a calumniator. Such a course appears, upon reflection, contrary to the dictates of nature and of reason. And besides all this, who, that possesses any sympathy—any of the tender feelings of humanity, toward the brute creation—can listen to such mournful looing, as is generally heard from calves, and remain unmoved? Should I raise a thousand calves, I never would resort, save through dire necessity, to the practice which is generally adopted, of weaning them by separating them from their mothers; for it is not only *inhuman*, but most *miserable economy*.

When calves have arrived at an age suitable for weaning, it is taken for granted, that they are then in a growing and thrifty condition; and it is, or *ought* to be, the desire of every one who raises stock, to *keep* his young animals *advancing:* for it requires one-third more feed to regain a pound of flesh, which an animal has lost, than would have done to produce that flesh, providing it had never been suffered to grow poor.

The mode of weaning calves, which I would advocate as being the most proper, the best and *economical*, and which I have practiced for two years past, with perfect success, I shall give in a few words;—and let those farmers who have been in the habit of separating their calves from their mothers, for the purpose of weaning them, try the experiment, the ensuing season, with one calf, and then cast the arguments, for and against such a course, into the balance of "*common sense*," and see which will preponderate.

After the calves have sucked about six weeks, I keep them, if possible, in fresh and tender pasture, and diminish from day to day, their usual allowance. By pursuing this course for one week, the calf will learn to eat grass enough to supply the place of milk which has been withheld. During the next week, I let him have a certain allowance, once in *two* days. The next week, once in *three* days. I then put on them a leather halter, with eight or ten tenpenny nails, with sharp points, driven through the nose piece, pointing outwards from the nose of the calf. The inside of the nose piece should have a piece of thin leather sowed to it, covering the heads of the nails, in order to prevent their hurting the calf's nose.

The calf is then turned into the same field with its mother;—and as we naturally suppose, it makes every effort to suck. But the cow feeling the prick of the nails against her udder, quickly whirls about, and repels the little fellow. After a few unsuccessful attempts; it will "*give up the chase*," and feed quietly by the side of its mother.

This practice with regard to weaning calves, possesses several commendable advantages when compared with the common practice of separating them from the cows.

When calves are weaned by the side of their mothers they are always more docile and tame—they learn to feed sooner—they learn to be driven sooner—they thrive much better—they do not utter such pitiful moanings, as when alone;—and by the side of their mothers, they pass their time in quiet rumination and rest.

Calves always *need*, and *should have* the best pasture which the farm affords. But it not unfrequently occurs, that the field which we would appropriate to the calves, contains twice as much feed as is needful for them. Now, if the calves are weaned by the side of their mothers, the cows are allowed to go into the same field; and eat the grass which, under other circumstances, would have been of no profit, save as a fertilizer of the soil.

Another consideration worthy of notice is, when calves are weaned by separating them from their mothers, special care must be taken to *keep* them separated during the winter; and many times it becomes necessary to make an *extra yard* and an *extra shed;* whereas, if they had been weaned, after the mode recommended, they might be allowed to remain in the same enclosure, during the day—but at night, should be stabled.

Farmers, who raise but a few head of cattle, as is the case with myself, experience great inconvenience, by being obliged to keep their cows and calves separate when they turn them from their stalls to go to water, or to exercise.

I have practiced weaning calves with the halter, for two seasons past, with *perfect success ;* and although my calves, both seasons, lost the halter from their head, before they had worn it a week, they never, after the first day when they were turned together, made any attempts to suck.

Perhaps some may think, as I at first did, that *shingle* nails in the nose piece, would subserve a better purpose than *ten-penny* nails—but they are *too short.* I have tried both kinds; and I find that long nails *only* will answer a good purpose. S. EDWARDS TODD. *Lake Ridge, Tompkins Co., N. Y., March*, 1849.

Potatoes Exhaust the Soil.

EDS. CULTIVATOR—I was taught when a boy that potatoes were not an exhausting crop, drawing but little strength from the ground. I have always taken this for granted, and I have made no experiment on the subject; more than to satisfy myself that they would not succeed well a second year on the same ground. If you should conclude that I have been indiscreet in taking any thing for granted and passing on forty years without examination, I could not find much fault with your conclusion. But to the subject. In the summer of 1847, a neighboring farmer requested me to go into his lot and look at his clover. On reaching his lot, he showed me a field of clover, one part of which was of a vigorous growth, while the other part was small—not more than half, if more than a third as large as the other, and the line distinctly marked through the lot. The clover was sown with oats the previous year. The year before that, my friend informed me, that the part of the field where the clover was best, was planted with corn; while the other part was devoted to potatoes. The whole, he said, was manured and cultivated just alike, and the clover was sown on all at the same time and from the same parcel of seed. Here was a thing so different from all my former notions, that I began to think I had, all my life, been laboring under a mistake.

I had several times had corn on a part of the field and potatoes on the other part; and had noticed that the subsequent grass crop was much the best where the corn had grown; but so deep was the impression that corn was a greater exhauster than potatoes, that I attributed the difference in the grass to other causes. At the time my attention was turned to my neighbor's clover, I had a piece of ground, which was seeded with grass, the previous summer with oats, after a crop of potatoes. The ground was well manured for the potatoes, and had previously borne large grass crops. I was much disappointed with the grass crop on this piece, and after mowing a very light crop two seasons, I last summer, turned in the sward and sowed grass seed—whether this will improve the crop of grass remains to be seen. Will some of your correspondents, who have made observations, enlighten us on this subject? R. R. P. *Manchester, Ct., Feb.* 15, 1849.

Draining Land.

Eds. Cultivator—I have received many letters of late, making inquiries respecting draining. The following are generally the questions:—1st. How far do you put your drains apart, and how deep? 2d. Where can tile be got, and at what price per 1000 or rod?—Do they not break with frost?

In answer to the first question, no man can tell how deep or how far apart the drains ought to be, until he has made some on his farm, and then experience alone must direct him. It is of no use to go deeper than the water lies, if that is deep enough to prevent horses or cattle from breaking the tiles. I think they should never be less than twenty inches deep,—mine are 2½ ft. deep. The distance apart must be determined by the subsoil; if porous, they will admit of a greater distance apart than if a stiff clay, unless there should be gravel under the subsoil; but the true way to lay out drains, is to lay them out as though the labor was costing nothing, because there is no danger of over draining; and no man after draining a field, and seeing that part of it has not got drains enough, can *resist* putting in more; and this is always done at more expense, and is seldom done as perfectly, as if done at first. *I speak from experience.*

In answer to the 2d inquiry, tiles can be got of Benjamin F. Whartenbury, Waterloo, Seneca Co. Three-inch tiles cost $10 per 1000, and 13 tiles will make a rod. Mr. Delafield, of Oaklands Farm, near Geneva, has imported a tile machine, by which we expect to get them still lower.

3d. They never break by frost if they are thoroughly burned, but for the lower ends of drains those that are hard burnt should be selected.

I think the following are all the directions that can be given on paper about draining. 1st. To be sure to make a good outlet for your drains; without that, a great deal of labor will be lost. In the next place, if possible, reach the fountain head. The water *almost* always rises near or at the highest part of the field. Early in the spring is the best time to stake out drains. Another thing very important is, to have tiles large enough for the main drains. I have one main drain laid with six-inch tiles, and a part with 2 six-inch tiles, and I find I shall have a part of it to take up, and lay further with double tiles. Some of the other drains that run into the main drain, which I may call sub-mains, may often require large tiles or double small tiles. I advise to do draining *perfectly* where needed. It will pay almost any expense.

I have put in 5000 tiles this spring, and will have in 5000 more by 1st May. My expense now is, digging 2½ feet drains, 15 cents per rod, tiles 13 cents per rod.

I find men can make better wages at my drains than at the public work. I can get them dug to any extent for 15 cents per rod, without board. I like to have them dug as narrow as they can be done, except some main or sub-main drains, in which I may lay double tiles. John Johnston. *Near Geneva, April* 7, 1849.

Information Wanted.

Eds. Cultivator—I should like to learn something respecting the character of that portion of country lying between the Blue Ridge and Alleghany mountains, in Virginia. Whether the country is generally level or hilly, and if it is well adapted to the raising of cattle; and if good farms of 150 to 200 acres, can be bought for reasonable sums. I have heard many conflicting reports about that country, and should like to hear its true character. Perhaps some of your subscribers from Pendleton, Bath, Rockbridge, and Greenbrier counties, will give information through the columns of *The Cultivator* respecting those counties. I should like, also, to obtain similar information in regard to the southern part of Kentucky. A Subscriber. *Perry, N. Y., March* 16, 1849.

Wool-Growing in South Carolina.

Eds. Cultivator—Having some thought of going into the wool-growing business, I now take the liberty of asking some questions about sheep-farming, which I hope will be answered. I know nothing of the business, as my questions will evince; but hope the desired information will be none the less freely communicated on that account.

What is the average cost of good Merino sheep, and what is the annual income per head? Or what is the common calculation among northern farmers on these two points? Are the sheep kept all the time in pasture, or are they turned into the woods or unenclosed mountains part of the time? There is a common belief here that sheep will not do well kept in the plantation, and farmers therefore, turn them into the woods in the summer. Does confining sheep to a particular place, cause them to be unhealthy, or are they so because the pasture gives out, and the sheep dwindle from starvation? In other words, will a sheep keep healthy a whole year on the same acre of land, provided it has plenty that is good and wholesome to eat and to drink?

How many months have the sheep to be fed, and how many can they live on pasture? Are they fed on grain, and if so, what kind, and how much? It is a common opinion here, that grain, particularly Indian corn, makes sheep shed their wool. Is this true? or do our sheep shed their wool from being fed freely on grain, immediately after they have been nearly famished by neglect? Most animals shed when thriving rapidly. On this account, as well as to make the wool grow as even as possible, is it not important that sheep be kept as uniformly as possible, so as to keep them always, as nearly as may be, in the same condition? How many sheep can one hand attend during the winter, and what would the manure of a hundred sheep be worth a month, if well littered?

What kind of sheep are considered most profitable? What kind or kinds of grass make the best sheep pasture, and what the best hay for sheep? If sheep are sent into the mountains with a shepherd, what is his wages, and how many sheep can he attend? How often should sheep have salt in the summer time, and how often in winter? Don't sheep, like all other animals, pay better *when well fed* and well cared for, than by the reverse policy?

I am aware that the answers to many of the above questions, depend much upon contingences and circumstances. What I seek, is such information as will enable me to understand the general philosophy of wool growing, and enable me to make calculations approximating the truth before I commence. And all such, whether from you or others, will be thankfully received. C. *Greenville C. H.*, *South Carolina*, *March* 2, 1849.

Our correspondent will find much information in regard to the subjects of his inquiries, in Mr. Pettibone's communication, published in our April number. We should be pleased to receive further remarks from those who are or have been engaged in sheep-husbandry. Eds.

Stall-feeding Cattle in Virginia.

Eds. Cultivator—The farmers of our county have in the last three years, commenced feeding cattle for the winter and spring markets, and our success so far is very flattering. Our sales this year range from $7 to $8.25 per hundred; and notwithstanding the very high prices paid for stock last fall, we have sold in this way, our grain at high prices, and been paid well for the trouble of feeding. I suppose about 1200 head were fed this winter within 10 miles of Charlottesville, and I have but little doubt, with a good corn crop, the number will be doubled next year. Most of these cattle are fed in close houses, and the greatest attention is paid to making and saving manure. Under this system—and dispensing with the tobacco crop, we hope in a few years to bring our lands to their original degree of fertility, and make Albermarle what nature intended her to be, the garden-spot of Virginia. R. W. N. Noland. *Albermarle Co.*, *Va.*, *March* 24, 1849.

Valuable Essay.

The Agricultural Society of Maryland, has lately awarded a prize to Thomas S. Pleasants, Esq., of Petersburg, Va., for the best essay on the means for preventing the destruction of various crops, by birds, insects, &c. We have read this essay with much interest. Though brief, it contains many valuable observations, deserving the attention of farmers. Mr. P. takes the ground that insects are the enemies from which farmers suffer the greatest loss; and that the best means of preventing the ravages of many of these, is the *protection of birds*. He observes that "birds should be regarded as friends and not as enemies," and that "the indiscriminate massacre to which they are subjected cannot be too severely reprobated. If there are any exceptions, it is only in the case of hawks and owls, which not only prey upon other birds of inferior strength and activity, but are particularly destructive to domestic fowls. Though they sometimes feed on moles and mice, and even snakes, yet on the whole, no defence can be offered in their behalf."

Destruction of Moles.—Mr. P. states that he "has the authority of a highly respectable neighbor for stating that he has nearly destroyed the moles in the grounds around his house by occasionally dropping in their tracks bread pills containing a small quantity of arsenic—say a fourth or a half a grain to each hill. The Palma Christi bean also causes them to disappear; but whether they are repelled by its odor, or, which is more probable, whether they are destroyed by the coating of the seed, which is said to be poisonous, is not certainly known."

Indian Corn in England.

Much has been said and great expectations excited in regard to the export of Indian corn and meal from this country to Britain. The favor with which the article has been received in the markets of that country, has been various, owing to the condition in which it has arrived there. Large quantities were at first sent over in *bulk* without any preparation by artificial drying. A large proportion of this was much injured by fermentation. Those acquainted with the transportation of Indian corn, know how difficult it is to bring it in its natural state, from the interior of our own country to the sea-board, without its heating and becoming musty and sour. The external coating of the grain, readily admits the absorption of moisture, which is soon followed by more or less decomposition.

To remedy these difficulties, kiln-drying, on various plans, was resorted to. Large quantities of meal from kiln-dried corn, have been exported. But this, in many instances, has not proved well. It has been injured in drying—has in some instances been *burnt*, and a portion of its nutritive properties destroyed.

For these reasons, the use of the article in England, either as food for man or beast, has been comparatively limited.

At a late meeting of the Council of the Royal Agricultural Society, this subject was spoken of by Mr. Keene. He advocated the culture in the southern counties of England, of a new and early variety of Indian corn, called "the Forty-day Maize," from its beginning to show its flower in about forty days from the time of planting. In the course of his remarks, Mr. K. alluded to the opposition of the laboring classes of England, to the use of Indian corn, which he thought was owing to the inferior quality of the grain. He had, he said, sought in vain in the London market for even a moderately fair sample of Indian corn flour. "It is all stoved and high-dried, to enable it to bear the voyage, and the 'life' is taken out of it, rendering it almost insensible to the action of yeast, and so charred, as it were, by the drying process, that it remains gritty and hard, resisting every kind of cooking, more particularly baking."

We should like to know what success has attended the export of corn or meal prepared on Mr. Stafford's plan of steam-drying. We have been inclined to believe that this process would obviate some of the objections above mentioned, and that it would accomplish the object of drying sufficiently for safe transportation, without injuriously affecting the grain. We have used meal which had passed through this process, and was more than a year old, which was nearly as good for all culinary purposes, as any meal we ever saw. The "life" is *not* "taken out of it," as is proved by the fact that grain which has been through the machine, will vegetate as well as that which has not.

Fence for Grounds liable to be Flooded.

Mr. George Myers, of Upper Sandusky, Ohio, sends us the following description of a "flood fence," said to have been invented and patented by Wm. Miller, of Pennsylvania:

Take two posts, 7 inches square and 5½ ft. in length, sink them 3 feet in the ground, (leaving 2½ feet above ground,) wedge them firmly in with stones alone. In the side of each post, and 3 inches from the ground, a triangular mortise must be sunk, 2 inches in depth, 4 inches high and 5 inches wide. A shallow notch in the shape of a V must be cut in the tops of the posts. A rail corresponding at the ends with the shape of this notch, is to be laid on the tops of the posts. The lower rail is then to be fitted in the triangular mortoise cut in the side of the posts. This is to be done by making the ends of that rail round, like to gudgeons, which are to be inserted into the mortise, each gudgeon about 2½ inches in diameter, and of any length that may please. This done, the frame of the fence is complete and ready for the boards to be nailed up and down on the two rails. The boards should be about four feet long, and nailed on that side of the rails against which the water is likely to flow.

This being finished, the fence is also finished, and the benefit of it is this: When the flood strikes against it, even at a moderate height, the round gudgeons of the lower rail will slide up the sloping sides of the mortise in which they lie, and the upper rail will, in like manner, rise out of the notches on top of the posts, and the entire pannel fall flat upon the ground, secured and resting on the gudgeons of the lower rail, until the swollen stream has spent its force and flowed over it. When the swell of water has subsided, all that is to be done to restore the enclosure, is to lift up the fallen pannels, which will easily turn on the gudgeons as an axle, and the fence will be again as perfect and firm as when first erected.

A new variety of Potato from South America.

A friend of mine received three potatoes from Bogota, in New Grenada, last April. He planted them on the 27th of that month. The season proved rather too short for them, since, on the occurrence of our first autumnal frost, Sept. 27th, they were perfectly green, and covered with bright blue flowers. They were dug by my own hand, about the 10th of October. They presented a heavy foliage, and exhibited a length and strength of roots, and number of stolens without a parallel in my experience. The tubers were very numerous, about eighty in each hill, mostly very small, many of them not larger than hazle nuts, and apparently as hardy as the roots of a *Shrub Oak*.

My friend planted them in a moist, rich clay soil, in his garden. I think they would have ripened better in dryer and poorer soil. I look upon them as a valuable acquisition, not only because I hope they will gradually accommodate themselves to our soils and seasons, but also, and much more, because their seeds afford a promising source, whence we may hope to derive new and strong varieties of valuable potatoes for general cultivation. They afforded twenty-five ripe balls last year, each ball yielding about one hundred good seeds.

The friend who sent these potatoes from South America, said nothing about the character of them as cultivated *there*. As cultivated *here*, they are uneatable, and would seem to answer to the description of the *wild* potato, as noticed in books.

Both the tubers and the seed of this new variety will be planted with care the ensuing season. C. E. G.
Utica, Jan. 1849.

New-York and Ohio Stock.

NEW-YORK vs. OHIO.—A paragraph has been published in several of the Ohio papers, under the head of "superiority of Ohio stock," stating that the cow which took "the first premium" at the New-York State Show, was purchased by a citizen of Ohio, and was offered at two county shows in that state, and "failed to take the premium." Now we do not know what cow was alluded to, but there is no evidence that she was considered the best offered at the last N. Y. state exhibition. The article conveys a wrong idea. The premiums on cows at Buffalo, were offered and paid under *six* different classes. Those for the first four on the list, viz., Durhams, Herefords, Devons, and Ayrshires, were of *equal amount*—$25 for each of first premiums; the other two, for "native or mixed breeds," and for the "best *milch* cow," were $20 each. These were exclusive of premiums offered on *fat* cows. From this it will be seen that no *one* cow could be properly said to have taken "the first premium," without specifying the class to which she belonged, inasmuch as there were *six* first premiums.

Notes for the Month.

COMMUNICATIONS have been received, since our last, from Wm. Carter, A Practical Farmer, Agricola, H. V. L., David Sill, J. C. J., Sam'l. James, S. O. Cross, L. G. Bingham, O. F. M., John Johnston, R. H. Drake, E. Halley, S. W. Johnson, I. Hildreth, Wm. Bacon.

BOOKS, PAMPHLETS, &c., have been received, since our last, as follows:—Report of the Com. of Ways and Means, on duties on imports, from Hon. E. B. HOLMES, M. C.—Elder's Cottage Garden of America, from the publishers, Moss & BROTHER, Philadelphia.—Scions of the Geneting and Bohanon apples, from LEWIS SANDERS, Esq., Kentucky.—Seeds of the "Hoo-Sung," from H. WENDELL, M. D.—Report of the Commissioners of the General Land Office for 1849, from the Commissioner, Hon. R. M. YOUNG.

AGRICULTURAL SCHOOL AND EXPERIMENTAL FARM.—We mentioned in our last that a bill had been introduced into the Legislature of this State, providing for the establishment of an Agricultural School and Experimental Farm. We are sorry to say that this bill did not pass the Senate. Subsequently, however, Mr CRISPELL, as chairman of the Committee on Agriculture for the Assembly, submitted a report in reference to this subject, to which was appended the following resolution, which was passed by both branches of the Legislature:

Resolved, (if the Senate concur,) That a board of eight commissioners, (one from each judicial district,) be appointed by the Governor, whose duty it shall be to meet at the city of Albany on the 16th day of May next, to mature a plan for the establishment of an Agricultural College and Experimental Farm, and prepare a statement of the probable expense of such an institution, and a detailed account of the course of studies and plan of operations recommended, to be delivered to the Governor on or before the first day of September next, to be by him submitted to the Legislature at its next session.

Under this resolution, the Governor has appointed the following gentlemen, to constitute the Board:

JOSEPH BLUNT, New-York, 1st District.
A. J. DOWNING, Orange county, 2d District.
JOHN P. BEEKMAN, Columbia co., 3d District.
SAMUEL CHEEVER, Saratoga co., 4th District.
EDMUND KIRBY, Jefferson co., 5th District.
ADRIAN LOTT, Chenango co., 6th District.
JAS. S. WADSWORTH, Livingston co., 7th District.
WM. RISLEY, Chantauque co., 8th District.

COST OF A LIME-KILN.—"A Subscriber" at Rutland, Vt., wishes to know what is the expense of putting up a lime-kiln; the kind of stone most proper for building it; the cost of filling; the kind of limestone which makes the best lime, the quantity of wood, and the labor required in burning, &c. We shall feel obliged if any of our correspondents will give the information.

THE HOME DEPARTMENT.—A bill for the establishment of a new department with this title, passed both houses of Congress at its last session. The department has been duly organised, and Hon. THOS. EWING, of Ohio, appointed secretary. We have not yet seen the bill, but we understand that the Home Department is to have the care of all matters relating to pensions, patents, public lands, Indian affairs and the census, and that the Secretary of this Department is to conduct such correspondence at home and abroad as shall tend to promote the improvement of agriculture, &c. We think this Department, under judicious management, will be of great importance to the industrial interests of the country.

THE GREYLOCK POTATO—We are indebted to Hon. A. FOOTE, of W'mstown, Mass., for a barrel of his new variety of potato, called the *Greylock*. They are well shaped and of good size. We have tried some for the table, and though they were evidently injured by exposure to the air, they were nearly equal to any other with which we are acquainted. We shall have them planted in such a way as to give them a fair trial. Mr. F. gives us the following account of their origin and habit of growth:—"It is an *accidental cross* between the Carter and Mercer,—taking the complexion of its *skin* from the *dark* color of the Mercer, and that of its *flesh* from the *whiteness* of the Carter. It is a vigorous grower, produces as well as the Peach Blow, [Western Red] and in texture and flavor is not excelled, in my opinion, by any known variety. Side by side, the last season, the tops of my Peach Blows were badly blighted, while those of my Greylocks remained in all their freshness. Time of ripening somewhat early, but not so early as that of the Mercer. Like all the finer varieties, it is subject (here,) to the 'potato disease,' but in a less degree than either of its parent varieties. Its origin is dated back four years."

EARLY POTATOES.—We have received from J. W. WHEELER, Esq., of Hyde Park, a sample of the *Kemp* variety of potatoes. We saw this kind growing on Mr. W.'s farm last summer, and were much pleased with its appearance. They are very early, being ten days earlier than the Mercers, and very vigorous growers. Mr. W. has raised this variety for two years, and has never seen a rotten one among them. Mr. Wheeler will please accept our thanks for the donation.

FINE BIRDS.—During a late visit at Bridgport, Ct., we were much interested with the handsome collection of choice birds, of various species, belonging to Mr. GIDEON THOMPSON, of that place. He has the Chinese golden pheasant, the silver, and the English pheasant, prairie hens, wild geese and swans. He has been very successful in breeding the pheasants, for several years, and furnishes some interesting facts in regard to their habits. He informs us that the golden pheasant lays when one year old—usually about twelve eggs—and sits twenty-one days. The male acquires its full plumage in two years. The silver pheasant lays when two years old—lays the same number of eggs, and sits the same length of time as the former, and the male is the same time in acquiring full plumage. The English pheasant lays at one year old—from twelve to twenty-five eggs—sits *twenty-six* days, and the male gets its full plumage during the first year. Mr. T. finds it very easy to domesticate the golden and silver pheasants; and they appear to be perfectly contented in his yards. The English pheasant, on the contrary, is restless, and always manifests a desire to return to a wild state. He has succeeded in crossing the English pheasant and the common fowl, but has never obtained any produce from the hybrid stock. He has never obtained a cross between either the golden or the silver pheasant, and the common fowl. The pheasants make their nests in the sheds or houses where they roost. Mr. T. takes all their eggs away as fast as laid, and uses those of Bantam fowls for nest-eggs. The males of all the pheasant tribe are very beautiful, but the golden is one of the most splendid of all birds.

The prairie hens before spoken of, have not yet bred.

Mr. T. has kept wild geese for several years, and has bred hundreds; but he states that until this year, he never had one lay before it was four years old. One has this spring, laid, that is but three years old.

The swans are of the mute species, (*Cygnus olor*,) are majestic birds, but have never bred.

These rare birds, with choice kinds of domestic fowls, African and Chinese geese, and several beautiful deer, not only promote the pleasure of the liberal owner, but being at all times to be seen, are objects of curiosity to the public, and are really ornamental to the *town*.

OLD CHEESE.—By the politeness of E. P. PRENTICE, Esq., we have received a sample of cheese, *twelve years old*. This cheese was made in Otsego county in 1837, and has been kept in a tin case which wholly excluded the air. It was perfectly sound when taken out, a few weeks since, and is equal, in all the qualities which constitute excellence in "old cheese" to any we have ever seen.

CLEANING CIDER BARRELS.—A correspondent (B. C. M.) at Sangerfield, N. Y., writes—"In rinsing out cider barrels and other casks, put in two or three trace chains. Shake them well and you will soon have a clean cask."

FARMERS CLUBS.—We understand that an "Agricultural and Mechanical Club" has been formed in the town of Auburn, the object of which is the free discussion of all subjects pertaining to the interests of mechanics and agriculturists. The officers are John Gaylord, President; Wm. Woods, Vice President; C. Ferris, Secretary; Joseph Swift, Treasurer. The association is considered an auxiliary to the Cayuga Co. Agricultural Society.

SELF-ACTING CHEESE PRESS.—It will be seen by an advertisement in this paper, that our agent at West Milton, Saratoga Co., has the patent-right of this press for several counties, and is prepared to furnish presses, or to dispose of the patent for certain districts. This press is a favorite one in some parts of the country, and is well worthy the attention of cheese-makers.

THE "**DOUBLE ACTING ROTARY CHURN**" is advertised in this number. We have received one of the churns, and will speak of its performances when we have had an opportunity to test it.

BLACK HAWK.—The advertisement of Messrs. HILL, in reference to this horse, will be found in our present number. He has always been held in high estimation by connoisseurs in horse-flesh; but the high prices readily commanded by his progeny, as they arrive at an age to show their superior properties, afford the best evidence of his great value.

MORSE'S GREY.—It will be seen by reference to the advertisemsnt of this horse, that he is still at his old stand. His stock is well known and esteemed in this vicinity, as good roadsters and fast travelers.

IMPORTED HORSE LEOPARD.—A notice of this horse was given in this paper for February. A more full description will be found in our advertising columns for the present month.

BEANS AS FOOD FOR ANIMALS.—Chemical analysis demonstrates that beans and peas are rich in nitrogen, or nitrogenous compounds; hence it is inferred that they would form a valuable food for laboring animals—the nitrogen supplying the waste of muscular tissue. But some trials which have been made show that they are valuable for animals in other respects. Beans are excellent for fattening sheep, and peas are highly prized for fattening hogs. Beans are not usually relished by hogs; but we have heard of their being ground and the meal being mixed with potatoes and fed to them, with good results. Bean meal has also been given to cows. The writer was acquainted with a farmer in Maine, several years since, who was somewhat noted for the general excellence of his milch cows, and who made it a rule to feed his cows with about a quart of bean meal, each, for two or three weeks before and after calving. The cows appeared to be very fond of it, and the farmer thought it was the best food for the combined objects of imparting strength, and producing a good flow of milk that could be used. A writer in the *Mass*

Plowman, states that he has lately been feeding a milch cow with bean meal with good effects. We hope experiments will be made in such a manner as to test its value, compared with meal from Indian corn. Mere *conjecture*, without actual trial, is worth but little.

☞ **Caution.—L. E. White.**—The public are cautioned against paying L. E. White for *The Cultivator*, as he has not been authorised to receive subscriptions for the last two years, and never paid for those he was authorised to receive the year previous.

Different crops in alternate rows.—J. G. Chadsey, of Wickford, R. I., made an experiment last year in relation to the cultivation of onions and carrots in alternate rows. The result was, that a piece planted with onions, in rows one foot apart, produced 507 bushels per acre; and the piece planted with carrots and onions in alternate rows, at the same distances as on the other lot, gave 380 bushels of onions, and 774½ bushels of carrots per acre. The value of the crop on the first-mentioned lot, was $202.80; manure and expense of cultivation, $93.10; giving a nett profit of $109.10 per acre. The piece planted with onions and carrots together, gave an aggregate value of $306.80 per acre; manure and expense of cultivation, $117.59; leaving a nett profit of $189.21. Part of the onions were sold at fifty cents, and the remainder at forty cents per bushel. The carrots sold mostly in the field, at twenty cents per bushel. The advantage of cultivating the carrots and onions together, is thought to be owing to the more ready admission of the sun's rays. The onions are sown six weeks before the carrots, and they mature and are taken off before the carrots shade the ground—the latter making their greatest growth in the last half of September, and through October.

Dissolving Bones by Steam.—A statement has lately been made to the Highland Agricultural society, in relation to pulverising bones by steam. It was stated that bones of any size could be reduced to a soft mass by this agency alone. A small boiler with a steaming vessel connected with it, capable of standing a pressure of 25 or 30 pounds to the square inch, was all that was required. If the vessel was filled with bones, and subjected to the action of steam above the level of the boiler (as they will not dissolve if covered with water,) at 25 lbs. pressure for a few hours, they will become quite dissolved—thus saving all the expense of grinding, and the sulphuric acid commonly used, which amounted to double the price of the rough bones. All the bones were so much softened, that the largest pieces found could be easily crushed fine by pressure in the hand. Dr. Anderson, the chemist of the society, thought the steaming would be cheaper than grinding. Prof. Traill thought the steamed bones would be preferable to those dissolved with sulphuric acid, because when the acid was added to bones, there was a destruction, in part at least, of the animal matter. The gelatine, which was of itself a valuable manure, would be saved by the steaming process.

Good Cows.—The statements in regard to the cows which received the premiums at the last show of the Worcester county (Mass.) Ag. Society, showed the following results: Joseph A. Reed's cow, which took took the first premium, was said to have been a Devon, five years old; calved the 26th of April. From June 10th to 20th, her milk produced 20¾ pounds of butter; from September 10th to 20th, 15¾ pounds of butter. Feed, pasture. Samuel H. Flagg's cow, which took the second premium, was of "native" breed. Calved May 15th. From June 10th to 20th, averaged sixteen quarts of milk per day, which yielded 22¾ pounds of butter; from September 10th to 20th, eleven quarts per day, which gave 14¾ pounds of butter. Feed, pasture only, in June; in September, hay at night, (pasture being dried up,) with two quarts wheat meal per day. S. B. Watson's cow, which took the third premium, calved on the 21st of March. From June 10th to 20th, made 22 pounds of butter; from September 10th to 20th, 15 pounds of butter; from April 22d to September 23d, 195 pounds of butter. Kept with other cows in pasture, with no other feed. Neither breed nor age mentioned. Simon Carpenter's cow, which received the fourth premium, was half Holderness, half "native." Four years old. Calved in April last. From June 10th to 20th, made 16½ pounds of butter; from September 10th to 20th, 14¾ pounds of butter.

The Society required that a statement should be made of the weight of butter produced in ten days from June 10th to 20th, and in ten days, from September 10th to 20th.

Profits of Poultry.—Ebenezer Lincoln offered a statement last year, to the officers of the Worcester County, (Mass.) Agricultural Society, from which it appears that on the first of March, 1848, he had thirty-six fowls: that from the first of March to the twenty-third of September, these fowls produced 224½ doz. of eggs; of this number, the family used their supply—the number not known: 18½ dozen were used for incubation, from which 171 chickens were raised: the remainder of the eggs were sold for $34.41, and a part of the chickens for $13.48—making his cash receipts, $49.89, besides the chickens on hand.

Premium Crops.—The Ontario, (N. Y.) County Agricultural Society, awarded premiums on crops grown in 1848, as follows: *Wheat*, first premium to John Rankin, 45½ bushels per acre; second premium, to Jared Wilson, 45 bushels per acre; third premium 31½ bushels per acre. *Indian Corn*, first premium to Uri Beach, 103 bushels per acre; second premium to John Rankin, 92 bushels per acre; third premium to E. M. Bradley, 83 bushels per acre. *Barley*, first premium, to E. M. Bradley, 60 bushels per acre; second premium to S. B. Dudley, 48 bushels per acre; third premium M. Adams, 45 bushels per acre.

Cure of Scab in Sheep.—A writer who states that he has tried many receipts for the cure of this disease, says he has found none so effectual as the following:

4 oz. Corrosive sublimate.
½ " Sal ammoniac.
2 " Powdered white arsenic.

½ lb. Tobacco, cut small and boiled in four or five gallons of water. All the other ingredients to be mixed with the decoction. The animal should be washed all over with the mixture, and it is said that a single application will generally effect a cure.

P. C. S., Tallmadge O., will please accept our thanks—M. E. M. Fitchville, O.: Shall be glad to receive the plans you speak of.

Prices of Agricultural Products.

New-York, April 22, 1849.

FLOUR—Genesee, per bbl., $5.62½a$5.75.—Fancy brands, $6.25a$6.75.

GRAIN—Wheat, per bush., Genesee, $1.20—Ohio & Missouri, $1. Rye, 57c Barley, 62a65c. Oats, 33a35c. Corn, Northern, 58c.—Southern, 52a56c.

BUTTER—best, per lb., 18a20c.—western dairy, 13a15c.

CHEESE—per lb., 6½a7½c.

BEEF—Mess, per bbl., $11 25a12.50—Prime, $8a$8.50.

PORK—Mess, per bbl., $10 37a$10 50—Prime, $8.50a$8.56.

LARD—per lb., 6a6½c.—grease, 4½a5c.

HAMS—Smoked, per lb., 6a9½c.

HEMP—American dew-rotted, per ton, $155a160.

COTTON—Upland and Florida, per lb., 6¼a7¾—New Orleans and Alabama, 6½a8½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	33a38c.
" half blood do.	31a33c.
" one-fourth blood and common,	29a30c.

Remarks.—There is a good home and eastern demand for flour, but nothing doing in the way of export. Pork and beef are in fair demand.

Palmer's Wheat Drill.

IT is an established fact that the drill culture is far superior to any other, and the only safeguard from drouth or "*winter-killing*."

It is also a fact that J. A Holmes & Co., of Brockport, Monroe Co., N. Y., are manufacturing the best Wheat or Grain Drill in the known world, and at the lowest price. Every useful agricultural implement should be afforded at a rate that places it within the reach of every farmer.

To accomplish this, the subscribers have made an arrangement with the inventor, to manufacture on a large scale for the coming season,

PALMER'S WHEAT DRILL.

An article combining all the advantages of every other grain drill or planter, in a simple substantial form.

Confiding in the prospect of *Large Sales*, they have determined on selling them at a *very low profit*, making the price of the drill at least *twenty-five dollars cheaper* than any other, capable of performing as much.

☞ We challenge the world to produce a drill equal to it. ☜

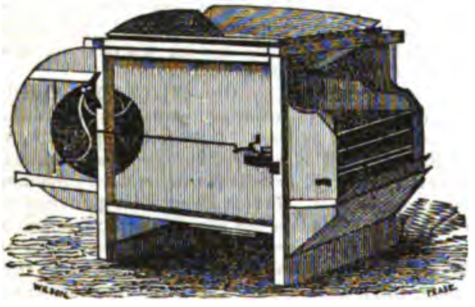
They are made of first rate materials, and in a strong, workmanlike manner, and finished in superior style. Each drill is WARRANTED.

Orders addressed to J. A. HOLMES & CO, Brockport, N. Y., will meet with prompt attention. Orders should be sent in or delivered to our authorised agents as early as the month of July, to secure a machine this year.

Brockport, May 1, 1849.—2t. J. A. HOLMES & CO.

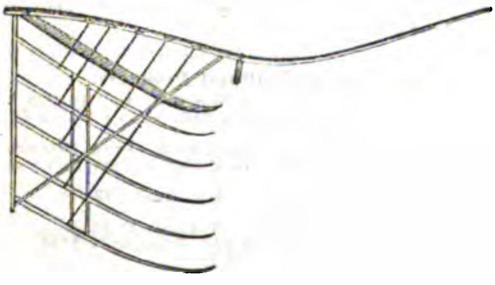
I. T. Grant & Co.'s

PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.
Junction P. O., Rens. Co., 8 miles north of Troy.
May 1, 1849.—5t. eom.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator

Important to the Farrier, Farmer & Stage Proprietor!

GEO. W. MERCHANT'S CELEBRATED GARGLING OIL.

Unparalelled in the history of Medicine, as the most remarkable External Application ever discovered for Horse's and Human flesh!

FACTS ARE STUBBORN THINGS!

☞ What has been done can be done again! ☜

IGNORANCE of facts and philosophy, however, start at the assertion that any one remedy can possess within itself the virtue of curing many diseases. Experience of more than fourteen years, has nevertheless established the fact, that Merchant's celebrated Gargling Oil, or Universal Family Embrocation, WILL CURE most cases, and relieve all such as *Spavins, Sweeny, Ringbone, Windgalls, Poll Evil, Callous, Cracked Heels, Galls of all kinds, Fresh Wounds, Sprains, Bruises, Fistula, Sitfast, Strains, Lameness, Sand Cracks, Foundered Feet, Scratches or Grease, Mange, Rheumatism, Bites of Animals, External Poisons, Painful Nervous affections, Frost Bites, Biles, Corns, Whitlows, Burns and Scalds, Chilblains, Chapped Hands, Cramps, Contraction of the Muscles, Swellings, Weakness of the Joints, Caked Breasts, &c, &c.*

The following is an extract from a letter dated Utica, April 27, 1846, to G. W. Merchant:

Your Gargling Oil is selling better and better every month. There is in this city a man who has the care of 193 horses, who has used several bottles, and says that it works like a charm, and is decidedly the best medicine he ever saw or heard of.

Signed U. H. KELLOGG.

Get a pamphlet of the agent, and see what wonders are accomplished by the use of this medicine.

Sold by Druggists and Merchants in the United States and Canada. All orders addressed to the Sole Proprietor,

GEO. W. MERCHANT, Lockport, N. Y.
May 1, 1849.—1t.

Fruit and Forest Trees.

SHRUBBERY, Buckthorn and Osage Orange Plants, of one and two years' growth, Strawberry Plants, Grape vines, &c., &c., for sale at the nursery, corner Delaware turnpike and Morton St., Albany.

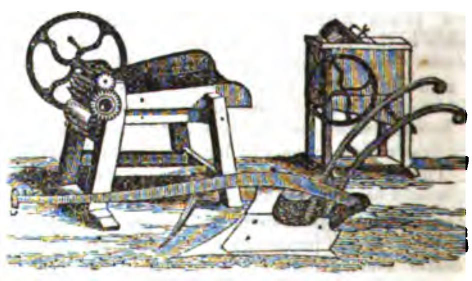
Orders left on the premises, or at H. L EMERY'S Agricultural Warehouse, No. 369 and 371 Broadway, Albany, will meet with prompt attention.

Albany, April 1, 1849.—2t.

Osage Orange Seed,

WARRANTED good, and sure to grow if managed according to the directions furnished to purchasers, for sale. Price $25 per bushel, $7 per peck, or $1 per quart; Payment to accompany the orders. Packages can be sent by express during winter, via Cleveland, Buffalo, &c., or via. Wheeling, Baltimore, &c., or via Cincinnati, to all places on the Ohio and Mississippi rivers.

M. B. BATEHAM.
Ohio Cultivator Office, Columbus O., April 1.—2t.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

Anthony & Emerson's
DOUBLE ACTING ROTARY CHURN.

THE attention of all Dairymen, and persons interested in good butter, is solicited to an examination of the merits of the above invention.

The proprietors feel confident that, upon investigation and trial, it will be pronounced the most practical and common sense *Churn* ever brought before a discriminating public. The abundant testimonials, the universal approbation, and the spontaneous acknowledgments of all who see the Churn in operation, or examine its principles, furnish ample proof of its merits.

Read the following Notices of the Press.

The operation of this churn before the Farmer's Club in Wilmington, Del , is thus related by Col. J. S. Skinner, editor of the *Plough, the Loom and the Anvil :*

Until dinner was announced, the chief attraction was Mr. Anthony's famous "*Double Acting Rotary Churn,*" which Mr. Emerson had brought down from Philadelphia, that the members might have ocular demonstration of its miraculous performance.

Like Maelzel with his chess-player, Mr. Emerson exposed the interior, to show that there was no witch or witchcraft about it—and truly, the whole contrivance seemed to be as simple as a salt-box. Two gallons of fresh milk were thereupon poured into it, and every man pulled out his stopwatch to note its performance—six minutes being allowed. Odds in favor of time. Away went the churn, turning as light as a little, old grindstone, in the country, worn down to the size of a breakfast-plate, and behold, at the end of five minutes, the operator took off the cover and exposed the butyraceous particles finely separated from the milk, and ready to be served up and submitted to another sense at the dinner table.

Rotary Churn.—Messrs. Anthony & Emerson are exhibiting a patent Double Acting Rotary Churn, in this city, by which excellent butter is produced in two minutes from sweet milk, a thing previously deemed impossible. It appears to be an excellent machine, and will save the producers of butter an immensity of labor. —*Philadelphia Ledger.*

We recommend to the examination of all interested in good living, the newly invented *Double Acting Rotary Churn*, by Messrs. Anthony & Emerson. One of its best recommendations is its *great simplicity*. It operates on a beautiful principle—the mechanical action of the air—which is mingled with the cream in such a manner, that a thorough separation of the particles takes place, preventing the cream from frothing on the surface, and doing its work with astonishing rapidity, and in the most thorough manner.—*Pennsylvania Inquirer.*

We always take pleasure in recommending to the public, all labor-saving and useful inventions. One of the best which we have seen for a long time, is Anthony & Emerson's Double Acting Rotary Churn. At the churning yesterday at 12 o'clock, good butter was made from sweet milk in three minutes. We understand that the proprietors are rapidly disposing of the rights for the different states, and it seems to afford an admirable opportunity for a profitable investment.—*North American and U. S Gazette.*

Anthony & Emerson's Double Acting Rotary Churn, the advertisement of which will be found in another column, is an invention which has attracted a great deal of attention and commanded universal commendation for its simplicity, and the extraordinary rapidity with which it performs its work, producing butter from the milk, in about three minutes time. Those who examine it will be struck with amazement that anything so exceedingly simple should not have been thought of before —*N. Y. Courier and Enquirer.*

Double Acting Rotary Churn.—This is one of those simple inventions which are calculated to be very useful, because they are truly labor-saving. We have seen butter made in three minutes from milk bought in our streets, which was not likely to be very pure.—*Daily Sun* .

Revolution in Churning—We learn that Messrs. *Anthony & Emerson*, the fortunate Inventors of the *Double Acting Rotary Churn*, advertised in this paper, have opened an office for the disposal of rights and churns, at 77 Fulton st., New York, where they are creating an extraordinary sensation among the dairymen and farmers of the interior, who flock to examine the invention, and who universally agree to its great superiority over any other Butter making affair now in existence. Did we not feel fully assured of the superiority of this great labor-saving invention, we should scarcely refer to it so frequently; but having observed it quite carefully, we heartily recommend it to our agricultural readers.—*American Cour.*

The public are invited to call and examine the machine, and see its utility tested It combines the following valuable qualities:

1st. It produces more butter from the same amount of milk or cream, than the ordinary method, as it does its work in a more thorough and scientific manner.

2d It is the cheapest, simplest and most convenient churn ever invented, embodying the true philosophical principles of butter-making.

3d. New milk after being churned, is sweet and suitable for family use.

4th. Instead of feeding the calf with milk directly from the cow—churned sweet milk will answer every purpose. By this process, the butter is all profit!

5th. It is a great labor-saving machine. By simply turning a crank, butter is produced from fresh milk in from three to six minutes, and from cream in less time. (It requires longer time to produce butter if the cream is cold. The best temperature is 65 degrees)

6th. It acts upon philosophical principles.

The butter is produced by the introduction of the *Mechanical and Chemical Action of the Air* By the revolution of the dasher, the air is forced between the globules of the cream upon the one side, and the production of a vacuum on the other, sucks up the particles of cream by the cavities causing a breaking of the globules, and a separating of the *fatty* or *butter* particles of the cream from the buttermilk, or more fluid portions—producing more butter from the same amount of milk or cream than any other churn, for the simple reason that it does its work in a more thorough manner

We offer it upon the following terms: If the Churn does not prove as recommended, it may be returned, and the money will be refunded.

We have constantly on hand, and for sale, five different sizes, prices $3, $4, $5, $6 and $12, capable of churning at one time, 1½, 3½, 5½, 10 and 20 gallons of milk or cream. Also, churns of any size made to order.

Exclusive county rights to manufacture and sell in the States of New York and New Jersey, for sale at about the rate of one hundred dollars for each 10,000 inhabitants.

A churning takes place every day, at 12 o'clock, at our Warehouse, No. 2 John St , corner of Broadway, where every one interested is invited to call.

A discount of 25 per cent. is allowed to the trad

All orders, *postage paid*, addressed to the subscriber, will be promptly attended to. T. DOUGLAS, Agent,
May 1—1t* No. 2 John St., Cor. of Broadway, New York.

Morgan Horse Black-Hawk.

THIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms, $15 the season, payable in cash, or a satisfactory note on demand with interest. For particulars in regard to pedigree and performances, see large bills, and previous volumes of *The Cultivator*. D. & D. E. HILL.
Bridport, Vt., May 1, 1849.—1t.

A Sultan from the English Stud.

Imported Thoroughbred Race Horse Leopard,

WILL be kept throughout the year, for the improvement of breed, at the stable of J. Lapham, in the Union, 5 miles northwest of Keesevile, except during the months of May and June. Beginning the first week in May, he will be at J. Lapham's from Monday until Friday; on Saturday, he will be at Keeseville. The succeeeding week, he will be in Champlain Village on Wednesday and Thursday, and in like manner each alternate week in May and June.

THE LEOPARD is a dark brown, standing over 16 hands high, and weighed over 1100 lbs. last year. Being only 4 years old at the time he was shipped, and lame in consequence of treading upon a small round stone at the last race he run, his lameness and the severity of the voyage impeded his growth; yet from the improvement he is making, it is confidently believed that he will attain to a weight of 1200 lbs. He was purchased of the Duke of Bedford for the reduced price of $1250, on account of his having despaired of his ever recovering from the lameness, otherwise he would not have sold him for four times that amount. The lameness was confined to the cartilage of the ankle, which has subsequently become entirely sound, and free from defect or blemish.

THE LEOPARD

Has won, at different races, about $10,000. He has no cross of common or impure blood since the date of the American Revolution. It is well known that the best English Roadsters and Hunters are produced by crossing common mares with full blood Racers, therefore, upon principles of judicious breeding, crosses with Morgan and Blackhawk mares, or Norman and French mares, will bring the best horses for all work. Persons wishing the service of the horse are requested to call and examine and satisfy themselves with regard to his peculiar merits.

PEDIGREE—Leopard was got by Liverpool out of Sneaker by Camel, (the sire of Touchstone in 1834, and Launcellot in 1840, both winners of the Ledger.) her dam by Selim (winner of the Ledger in 1811,) out of Hare, by Sweetbriar. Liverpool was got by Prime Minister out of Rosamel, bred by Mr. Van Sittart in 1813, got by Reubens, her dam Momentilla, by a brother of Repeater, (Diomed Imperator by Camel, by Whalebone,) out of Selim, the mare bred by Mr. Ewles in 1812, her dam Maiden by Sir Peter, (sire of the winners of the Ledger) by Phenomenon sire of Ambidexter, (winner of the Ledger in 1780) out of Matron by Florazel, (sire of Tartar in 1792 and Antilla in 1793, both winners of the Ledger,) out of Maiden by Matchum, sire of Hahondaise, winner of the Ledger in 1778. (See English Stud Book)

CERTIFICATES.—I certify upon my honor that my stud horse Leopard is 6 yrs. old, was got by Liverpool out of Sneaker by Camel; was the property of his Grace the Duke of Bedford, and that I purchased the said horse of his Grace, for £250 Sterling.

LIONEL FITZGERALD. Cornet Queen's Light Dragoons

I am convinced that the above statement is true in every particular. THOMAS WALTER JONES, Captaincy Q. L. D.

PERFORMANCE.—The following is but a partial statement, being taken from memory, the calender being in Montreal. Leopard won the Produce stakes, (Sweepstakes) of £500 on the New Market Heath, 4 miles, in June, 1846. Also the same year, Sweepstakes of £600 at Ascot Heath, 4 miles, besides various other matches, being at the time the property of the Duke of Bedford. Also ran for the Queen's plate at New Market, going 3 miles with 8 stone 10 lb. on his back (122 lbs) in 5 minutes and 48 seconds. All of which is recorded in the racing calender for 1846.

Odletown, Oct 7, 1848. LIONEL FITZGERALD,
Cornet Queen's Light Dragoons.

TERMS—$10 for a single service, $2 50 for each repetition; $20 the season, and $25 for insurance; it being at the option of the man who tends to accept or reject individual animals. Accidents to mares will be at the risk of their owners. Mares from a distance will be pastured at J. Lapham's, and receive good care for a reasonable compensation. OLIVER K. LAPHAM & CO.,
Peru, N. Y., May 1, 1849.—1t. Proprietors.

Wendell's Mottled Bigarreau Cherry.

Described page 199, Am. Journal of Agriculture and Science.

THE subscribers offer for sale this spring, trees of the above new and choice variety of Cherry so much sought after by the admirers of this choice fruit. Price $1.

Also, their usual supply of

FRUIT TREES

viz: Apples, Plums, Pears, Peaches, Cherries, Apricots, Quinces, extra size. European Mountain Ash, and other Ornamental trees.

A liberal discount made to those who purchase in large quantities. WILSON, THORBURN & TELLER,
April 1.—2t. Nurserymen, Albany.

Agricultural Warehouse and Seed Store,

Corner of Washington and Exchange Streets, Buffalo, N. Y.

WE have opened an establishment of the above kind in this city, and shall keep constantly on hand, both at wholesale and retail, one of the largest and best assortments of agricultural implements in the Union; and shall offer nothing for sale, that we do not previously test upon the farm. Our seeds are imported from one of the most reliable dealers in Europe. Clover and grass seed we shall be able to supply to Eastern dealers on the most liberal terms.

Manufacturers of farming implements are requested to send us at least a sample T. C. PETERS & BRO.
Buffalo, Dec. 1—6t.

The old Morgan Gifford,

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms $25, $5 of which to be paid at the time of service, and the remaining $20 if the mare proves in foal.

Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.
March 1, 1849.—5t.*

The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; on Saturdays, at the stable of John C. Munro, in Belliale.

Terms, $10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action, General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19. MUNRO & MASON.
April 1, 1849—3t.

The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stitenham, Yorkshire, England, in the year 1841. He was imported by C. T. Abbot, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pastures. with plenty of water and the most secure fences will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position He is compact and short-legged, yet of a rangey and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro—her dam by Waxy; Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle; Henry Rhodes, Trenton; A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms $5 in advance, and $5 additional if the mare is got in foal. April 1.—3t. J. B. BURNET.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, Plymouth, Mass., the following stocks, suitable for budding in the summer, and grafting in the spring: Pear, Quince, Cherry, Plum, Apple, Dwarf do (Paradise,) Dwarf Cherry, (Mahaleb.) Also, the following ornamental stocks, 2 to 4 ft. and stout: Mountain Ash, Hawthorn Ash, Elm, Spanish Chestnut, Norway Maple, Sweet Briar, Lime, Larch, Scotch fir, (2 ft.) Silver fir, (1 ft.) Norway fir, (1 ft.) Arbor Vitæ, (15 in.) Balsam fir, (6 in.) Cedar of Lebanon, Araucaria imbricata, Red Cedar, Deodar Cedar, Chinese arbor vitæ, Lucombe oak, Scarlet oak, Althæas, Double hawthorn, (6 ft.) Copper leaved Fern leaved and Purple Beeches, Japan Pear, (white and crimson,) Deutzia Scabra, Spiræa Lindleyana, Chas. Xth, and other lilacs, Virgilia Lutea; Roses in great variety; Honeysuckles, Wistaria Sinensis, and other climbers, Clematis flammula, azurea and Sieboldii, &c., &c., &c. 50 Select Pears, standard and dwarf, fine trees 2 to 4 years from bud, and well branched, including the very best sorts. Red Antwerp, Fastolff, Franconia and River's new large fruited monthly raspberries. Cherry (new,) May's Victoria (new,) Knight's Large Red, White Crystal, and other currants. Gooseberries. Isabella, Catawba, and Black Hamburgh grapes. Also, in pots, Verbenas in 30 select varieties, including Gem, Othello, Suzette, Eximia, Susanna, Exquisite, Eclipse, &c. Dahlias, including the new fancy sorts.

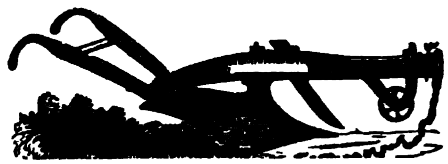
Descriptive priced lists sent to post paid applicants.
Feb. 1—4t. B. M. WATSON.

Short-Horns at Auction.

THE subscriber being about disposing of 50 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr. Whittaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq. of Yorkshire, Eng, from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opininon, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

"The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given—say 6 to 12 and 18 months, if desired The particulars will be given in the pedigree list. GEO. VAIL.
Troy, April 1, 1849.—3t.



Agricultural Ware House,

193 *Front Street, New York.*

THE subscriber, manufacturer and dealer in Agricultural Implements, offers for sale a large assortment of PLOWS, embracing over 200 different sizes and patterns, among them the superior *Premium Plow*, which received the highest premium of the American Institute in 1848, and of the great State Fair in 1847.

This Plow has no equal for lightness of draft. and for all purposes, is recommended with full confidence as being the best in use.

He has also the Centre Draft and Eagle Plows, which will be sold at the lowest rates.

Also, Cultivators, Straw Cutters, Corn Shellers. Fanning Mills, Grain Cradles. Corn and Cob Mills, Portable Grist Mills, Horse Powers, Threshing Machines, and a general assortment of Farming and Gardening Implements, all of which will be sold at extremely low prices.

Brass and Iron Wire Cloth Seives, Screens. &c.
Bone Dust and Guano. JOHN MOORE,
April 1.—2t. 193 Front street, New York.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone.*

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Farm for Sale.

THE subscriber will sell his farm of 300 acres, situate near the centre of the town of Hillsdale, in the county of Columbia, known as the

MCKINSTRY PLACE,

Having been possessed by that family about a century, lying adjacent or contiguous to the route of the Harlem Railroad, and upon which there are 2 good and convenient dwelling houses, one a recently built cottage, and barns, sheds, lofts, and numerous out houses, two wells of pure soft water of a superior quality, excellent orchards of grafted fruit, fine stone wall fences, some first rate fields for any kind of grain, about 45 acres of meadow land, and about 80 acres of wood land, well watered by springs; three small streams run through it, the head waters of the Roeliff Jansen's Kill or Creek rendering it a desirable farm for grazing, and valuable to practical farmers for other purposes of husbandry. It is capable of being divided into two good farms. Title made unquestionable by the undersigned, with the aid and assent of Judge Augustus Tremain, who now resides on the premises; land now worked and occupied by Mr. James Darrow. The farm is now well stocked with Devonshire cattle, and a choice flock of Saxon sheep, which, together with the farming utensils, will go with the old Homestead, if the purchaser wishes.

JUSTUS McKINSTRY.

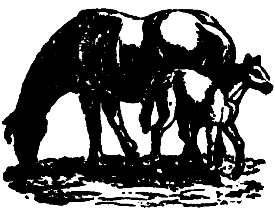
If desired, one-third or one half of the purchase money can remain on bond and mortgage for a term of years.

Hudson, April 1.—2t.*

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!



THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro!," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown tobe of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one.

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haymarket Square. Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. Feb. 1.—3t.

A Book for Everybody.

COLE'S AMERICAN FRUIT BOOK.

S. W. COLE, Esq., Author of the popular work, entitled The American Veterinarian, of which 22,000 copies have already been published, has, after years of patient labor and close investigation, completed his great work, entitled

COLE'S AMERICAN FRUIT BOOK:

A work which we believe is destined to have a more widely extended circulation than any similar work, ever before offered to the American public. We believe so for the following reasons.

FIRST—It is a mature work and a practical one, one upon which Mr. Cole has spent many years of study and close examination, and knowing the wants of the community has met those wants, in a plain, concise and familiar manner, avoiding technicalities, and scientific specifications and definitions, useful only to the few, he has made a work intelligible to all. It will be emphatically, a book for THE PEOPLE.

SECONDLY—It will have an unprecedented sale on account of its cheapness. It makes a volume of 288 closely printed pages Illustrated with nearly 200 beautifully executed engravings, by Brown, and is sold for 50 cents, firmly bound in leather, and 62½ cents in Fancy Cloth, with gilt backs. It contains full directions for Raising, Propagating and Managing Fruit Trees, Shrubs and Plants, with a description of the best varieties of FRUIT, embracing several new and valuable kinds; embellished with Engravings, and Outlines of FRUIT TREES, and various other designs. Emphatically, a

BOOK FOR EVERYBODY,

As well for the man who eats Fruit as for him who raises it.

This valuable work is just from the press, and is now for sale at our counter, and will be offered for sale by our regular agents throughout the country.

JOHN P. JEWETT, Publisher, 23 *Cornhill, BOSTON.*

April 1.—2t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels. or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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NOW IN THE PRESS,

TO BE PUBLISHED BEFORE THE CLOSE OF THE MONTH,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

☞ The publication of this work has been delayed by causes beyond the control of the author and publisher. It may yet be some weeks before it will be issued.

Five Hundred Tons of Peruvian Guano.

FRESH from the Chinche Islands, for sale in lots to suit purchasers. Farmers will do well to be on their guard, of whom they purchase guano, as much is sold under the name of Peruvian which is spurious, and almost entirely worthless. To avoid imposition, each bag containing Genuine Peruvian Guano, will have the brand of A. B. Allen & Co., Agricultural Warehouse, 191 Water Street, New York.

Also Bone dust of superior quality, at 40, 50, and 55 cents per bushel. Poudrette, Plaster of Paris, Lime, and Patagonian Guano.

A. B. ALLEN & CO.,
May 1.—1t. 189 & 191 Water street, New York.

Field and Garden Seeds.

A FULL and complete assortment of Field and Garden Seeds, warranted fresh and true of their kind.

A. B. ALLEN & CO.,
189 & 191 Water street, New York.

Genuine Eagle Plows.

AS many spurious Plows from this city and elsewhere, are sold under the name of "Eagle," Farmers and Dealers are cautioned if they wish to obtain the *genuine* EAGLE PLOW, that they will always find "Ruggles, Nourse and Mason, Boston and Worcester," and "A. B. Allen & Co., New York," branded on the beam.

The subscribers being sole agents in New-York, for the above Plows, offer them for sale at the manufacturer's prices. Also, those of Minor, Horton & Co., and many others of the best and most approved kinds, making the largest and finest assortment to be found in the United States.

Other Agricultural and Horticultural Implements of all kinds for sale.

A. B. ALLEN & CO.,
May 1.—1t. 189 & 191 Water street, New York.

Morse's Grey.

THIS celebrated horse will stand the ensuing season at the stable of JAMES RICE, in Spiegletown, three miles north of the village of Lansingburgh. He is a beautiful dapple grey, 15¾ hands high, strongly and finely proportioned; has trotted his mile in 2 minutes and 50 seconds; is a square trotter, and combines first-rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper, are eagerly sought after in the market, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the extraordinary prices they command, render him by far the most profitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner, Mr. CALVIN MORSE.

Terms, $10 the season. Insurance to be agreed upon.

Communications addressed I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

May 1, 1849.—3t.

Devon Bull for Sale.

THE subscribers offer for sale their full bred *Devon Bull*, from the best blood stock ever imported to this country, as they are prepared to show. Specimens of *his* stock may be seen at the subscribers, and at other places in this vicinity.

F. W. & J. B. COWLES.
Farmington, Ct., April 1, 1849.—1t.*

Early Potatoes, Polish Oats,

SPRING Wheat, Rye, Barley, Seed Corn, various kinds, for sale at the Albany Agricultural Warehouse.

H. L. EMERY.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE FOURTH VOLUME OF THE HORTICULTURIST commences on the first of July, 1849.

The Publisher, at the close of the third volume, desires to return thanks for the patronage bestowed on this work. It has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. Its influence on the progress of Gardening, and the information in matters of Rural Taste, is already strikingly apparent. Its extended and valuable correspondence, presents the experience of a large body of the most intelligent cultivators in America; and the instructive and agreeable articles from the pen of the Editor, make it equally sought after by even the general reader, interested in country life.

The work is published monthly, in 8vo. form of 48 pages—each number accompanied by a frontispiece and several other engravings. The list of constant contributors embraces our first horticulturists and practical cultivators. The "FOREIGN NOTICES" present a summary of all the leading horticultural Journals of Europe; the "DOMESTIC NOTICES," and "ANSWERS TO CORRESPONDENTS," furnish copious hints to the novice in practical culture; and the numerous and beautiful illustrations—Plans for Cottages, Green-Houses, the Figures of New Fruits, shrubs and plants, combine to render this one of the cheapest and most valuable works to country gentlemen on either side of the Atlantic.

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

☞ The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:

NEW-YORK—M. H. NEWMAN & Co., 199 Broadway.
BOSTON—J. BRECK & Co., 52 North Market-st., and E. WIGHT, 7 Congress-st
PHILADELPHIA—G. B. ZIEBER.

ADVERTISEMENTS—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from these terms.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, JUNE, 1849. VOL. VI.—No. 6.

Arboriculture.

Cultivation and Preservation of "Wood-Lots."

Editors of the Cultivator—I can stand it no longer. The inconsiderate clearing of the wood-lands of New England by our fathers, without regard to the selection of those lands suitable for arable and grazing purposes,—finds an apology in the fact that forests, generally, were an incumbrance to them. The greater thoughtlessness and improvidence of their sons, however, in still persisting in the practice, while we have more lands already cleared than a proper and profitable husbandry is bestowed upon, is, to me, a painful and surprising matter. Besides being ruinous to the present owner, it is a perfect "devil take the hind-most" policy for the sons. Go where we will, we are compelled to look upon rough inaccessible lands and tops and acclivities of hills, which have been swept of their natural covering and fertility, and turned into pastures affording but scanty returns for the hard labor of the animals *attempting* a subsistence thereon, and still smaller returns to the proprietor. There is scarcely a farm in this section but has acres of this kind of land that would have been worth five times, yes, in many cases, ten times as much as they now are, had a second growth of wood been permitted to run up on them.

The operation of clearing and burning a large tract of hill-side, woodland has been going on within my observation for a few years past. It has been of the genuine, old-fashioned sort. A large piece is chopped over, each winter, and the wood and timber marketed. The next August, a heavy fire burns up the vegetable mould on and near the surface, and the ashes left, operating as a powerful and unnatural stimulus on so light a soil, only cause it to give up its organic matter, its fertility, the more speedily. Rye is sown, and yields so fine a crop that another of the same kind is put in the next fall, and *possibly* a light sprinkling of grass-seed with it. At the end of five years, the land is so far exhausted, that five acres will not keep an old sheep alive, through the summer. Then again, a valuable tillage-field, which has had the protection of this wood from bleak winds, is now exposed to every northern blast, which, in this climate, is a serious consideration. Had the inconsiderate owner just taken off his wood, and "therewith been content," leaving his hill-side to be covered with another growth of trees, he could have sold it to-day, if he wished, for twice what it will now bring.

Ten years ago, I cut the wood off a long stretch of side-hill, and in my inexperience, burnt over a portion of it for pasturage. The remainder was left to grow up again to wood. Many of the young trees are 6 to 8 inches through; they are all very straight and thrifty, and I value one acre of this land more than five acres of that which is in pasture. I shall not again permanently clear up my steep hill-sides.

At the solicitation of a railroad friend, a short time since, I accompanied him into the country directly south of this, to examine and estimate the value of some "wood-lots." I was forcibly struck with the amount of rugged, barren land, inaccessible for agricultural purposes, which had been thrown into open country, even by the present owners. Had a second growth of wood been permitted to run up on the land, instead of subjecting it to the burning and cropping process, it would have been now worth far more to the owners;—for a railroad is tapping that country, with its large and clamorous demands for wood and timber. Riding along with an old inhabitant of one of the towns visited, he pointed out a wood-lot which was cut over twenty years since, and suffered to grow up again to wood, contrary to the usual custom. It was sold at auction, a short time since, for $3,400. It would not have brought over $800, had it been in pasture from the time it was cleared.

Warm hill-sides, having an eastern or southern slope, send up a second growth of wood with great rapidity. Although they may not eventually, support so heavy a growth as strong level land, they will yet produce all the wood they are capable of sustaining, much sooner. A friend directed my attention the other day, to a tract of land, with an eastern slope, in a neighboring town, which was cleared of an original growth of wood, 25 years ago, and left to itself to produce another growth from the sprout. The land, with its present standing wood, was appraised a year or two since, at $50 an acre. Ten dollars an acre, is all that similar land, in pasture, in that vicinity, has ever been worth. By the application of a little arithmetic then, we find that the increase of this second growth of wood has been equal to 16 per cent. interest, per annum, on the worth of the land, without a dollar's expense for the cultivation,—that is, $10, at 16 per cent. simple interest, for 25 years, amounts to $40; to which add the principal, the worth of the land, and we have $50, the appraised present value per acre.

Take another view. The importance of a due proportion of wood in equalising moisture, and preserving the constancy of our small springs and brooks, as well as restraining, in a great measure, the sudden rise and overflow of our rivers, is well known to observing men. Several fine springs and little brooks, which were familiar friends in boyhood, have either entirely disappeared, or are only seen for a season in the spring.

"In wet seasons, the decayed leaves and spongy soil of wood lands retain a large proportion of the falling rains, and give back the moisture in time of drouth, by evaporation, or through the medium of springs. They thus both check the sudden flow of water from the surface into the streams and low grounds, and prevent the drouths of summer from parching our pastures and drying up the rivulets which water them. On the other hand, where too large a proportion of the surface is bared of wood, the action of the summer sun and wind scorches the hills which are no longer shaded or sheltered by trees, the springs and rivulets that found their supply in the bibulous soil of the forest disappear, and the farmer is obliged to surrender his meadows to his cattle, which can no longer find food in his pastures, and sometimes even to drive them miles for water. Again, the vernal and autumnal rains, and the melting snows of winter, no longer intercepted and absorbed by the leaves or the open soil of the woods, but falling everywhere upon a comparatively hard and even surface, flow swiftly over the smooth ground, washing away the vegetable mould as they seek their natural outlet, fill every ravine with a torrent, and convert every river into an ocean."*

Several successful attempts have been made within my observation, in improving rugged and exhausted lands by planting them out to trees. Within sight while writing, is a knoll that has been completely renovated by a plantation of the white locust. It was originally, a coarse worthless gravel, barren of herbage of any kind. I remember that the proprietor was laughed at by his neighbors for attempting to grow trees on his barren gravel. The locusts got root however, and although their growth was slow and feeble, they gradually formed a soil by the annual shedding of their leaves; and as the soil became thus strengthened, their growth became more vigorous, new shoots sprang up in all directions from the roots; and after awhile, clover and other grasses, began to appear on the open ground. I have been curious to observe the gradual improvement of this land. Last summer I noticed that the grass was very luxuriant, and would have yielded at the rate of a ton or more of hay to the acre, in the open spots. The locust wonderfully endows a poor soil with new energy and fertility. It seems to make its demands for nourishment more largely upon the atmosphere than any other tree, and gains foothold in soils absolutely barren of fertility. Then again, its leaves are small, with very rough edges, lying perfectly still where they fall, while those of most other trees are blown about by the winds, collecting in hollows or in large heaps.

In my notice of Mr. Rice's farming, last year, I remarked that he plowed up a large tract of unproductive hill-side, several years ago, and planted it with chestnuts, in rows four feet apart every way. The first sprouts coming up rather crooked and scrubby, he went over the field and cut them down close to the ground, which caused new sprouts to shoot up straight and vigorous. The trees are very thrifty, completely shade the ground, and grow more and more rapidly as the soil becomes strengthened by the annual deposit of leaves. So well satisfied is he with the experiment, that he is now placing other worthless lands in a similar course of improvement.

The late Hon. John Lowell, the first and most zealous advocate for improvements of this kind in New England, planted three acres of waste land on his estate at Roxbury, Mass., to a variety of forest trees,—the whole value of the land not being $10 per annum.

In a communication upon the subject, he says, "The land was about half of it plowed and kept open with potatoes for two years, and then abandoned to the course of nature. The pines were taken up out of the forest with great care, not more than five feet high. Wherever I had the cupidity or impatience to introduce a larger tree, I either lost it or it became sickly. In some places I planted acorns, and as to my hard-wood forest trees, transplanted from the woods, finding they looked feeble and sickly when they shot out, I instantly sawed them off at the ground or near it. This required some resolution, but I have been abundantly paid for it.

"The result of this experiment is this, that in a period of from thirteen to fifteen years, I have raised a young, beautiful and thrifty plantation, comprising, almost every variety of tree, which we have in Massachusetts, which are now from twenty-five to thirty-five feet high, and some of which, the thriftiest white pines, actually measure from nine to twelve inches in diameter. The loppings and thinning out of these trees, now furnish abundance of light fuel for summer use, and upon as accurate a calculation as I am able to make, I am convinced that the present growth, cut down at the expiration of 14 yrs. from the time of planting, would amply pay for the land at the price it would have brought."

Mr. S. Brown, in a communication to the *Boston Cultivator*, says—"I have one acre of land which, 30 years ago, was not worth more than ten dollars; I have no recollection of there being a tree upon it, with the exception of one apple tree, and some scattering bushes; the appearance of the soil was such as to forbid any attempt at cultivation, and my cattle have rambled over it from that day to this; in the mean time, the young pines voluntarily sprung up and became a forest, and now, I would not thank any man to pay me $60 for the standing wood on that acre. Now, if any man can tell me how to improve such land to better advantage, I would thank him for the information."

Mr. Webster has a great variety of thrifty promising young forest trees on his estate at Marshfield, which he has raised by planting the seeds. There are several reasons for preferring this mode of cultivation to that of transplanting. The expense of planting seed is less than that of transplanting trees; the trees will be straighter and more vigorous; they neither require staking nor watering; and at the end of eight or ten years they will ordinarily have acquired a much larger growth than trees transplanted at the same time.

The success in attempting improvements by planting waste or exhausted lands to wood and timber, will very much depend upon choosing those kinds of trees that are most naturally adapted to the soil. Prof. Johnston has some very interesting remarks upon this point, a part of which I will venture to quote. Speaking of the improvements going on in Europe, in renovating exhausted lands by planting trees, he says:

"The most precise observations on the subject with which I am acquainted, are those which have been made in the extensive plantations of the late Duke of Athol. These plantations consist chiefly of white larch, and grow upon a poor hilly soil, resting on gneiss, mica-slate, and clay-slate. In six or seven years the lower branches spread out, become interlaced and completely overshadow the ground. Nothing, therefore, grows upon it till the trees are 24 years old, when the spines of the lower branches, beginning to fall, the first considerable thinning takes place. Air and light being thus re-admitted, grasses spring up and a fine sward is gradually produced. The ground, which previously was worth only 9*d*. or 1*s*. (rent ?) per acre as a sheep pasture, at the end of 30 years becomes worth from 7*s*. to 10*s*. per acre.

"On the soil planted by the Duke of Athol, the larch shot up luxuriantly, while the Scotch fir lingered and languished in its growth. Thus the quantity of leaves produced and annually shed by the former was vastly greater than by the latter tree. Had the Scotch fir thriven better than the larch, the reverse might have been the case, and the value of the soil might have been increased in a greater proportion by plantations of the former tree.

"In regard to the relative *improving power* of the several species of trees, the most rational natural rule by which our practice should be guided, seems to be contained in these three propositions:—

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* Address of Hon. Geo. P. Marsh.

1. That the soil will be most improved by those trees which thrive best upon it.

2. Among those which thrive equally, by such as yield the largest produce of leaves; and—

3. Among such as yield an equal weight of leaves, by those whose leaves contain the largest proportion of inorganic matter—which bring up from beneath, that is, and spread over the surface in largest quantity, the materials of a fertile soil.

“The mode in which the lower branches of the larch spread out and overshadow the surface is not without its influence upon the ultimate improvement which the soil exhibits. All vegetation being prevented, the land besides receiving a yearly manure of vegetable mould, is made to lie for upwards of twenty years in uninterrupted naked fallow. It is sheltered also from the beating of the rain drops, which descend slowly and gently upon it, bearing principles of fertility instead of washing out the valuable saline substances it may contain. Beneath the overshadowing branches of a forest, the soil is also protected from the wind, and to this protection Sprengel attributes much of that rapid improvement so generally experienced where lands are covered with wood. The winds bear along particles of earthy matter* which they deposit again in the still forests; and thus gradually form a soil even on the most naked places.”

Thousands of acres of waste lands in New England, entirely unprofitable to the owners and to community, might, by judicious planting with trees, be redeemed from their sterility,—thus adding, in effect, to the territorial extent as well as wealth of the country; besides in many cases five-folding the value of individual estates thus planted. Numerous instances might be given in proof of this statement.

It is worthy of separate and particular consideration that our country is fast becoming penetrated in every direction by railroads, whose consumption of wood is so enormous that we must look well to our forests, or they will vanish. The facilities of transportation which they afford will induce a greater demand for lumber and stuff for turning purposes, for the manufactories near the sea-board. Thus new and greater inducements for the cultivation and preservation of woodlands are yearly becoming developed, urging our farmers to awake to the importance of this subject.

In treating this topic at this time, I have chosen to give a somewhat desultory statement and citation of facts and principles which are so palpable as to come within the observation of every one, rather than a methodical and formal essay;—hoping by this means the more surely to attract the attention of the practical farmer. F. Holbrook. *Brattleboro', Vt. Feb.* 1849.

Different Varieties of the Ox.

The Middle-Horns.

The Hereford Breed.—As this valuable breed has been introduced, and is increasing in several sections of the country, we offer a few remarks in reference to its history and qualities.

We have mentioned in a previous chapter, that the Herefords are a branch of one of the original stocks of Britain. They have been known in certain districts for an indefinite period; but it was not until after the middle of the last century that any systematic attempts were made to improve the breed. The first effort of this kind, of which we have any authentic account, was made by Benjamin Tomkins, of Wellington-Court, Herefordshire. He commenced, according to Prof. Low, about the year 1766, with two cows, which, previous to his purchase of them, had often attracted his attention on account of their singular aptitude to fatten. Mr. Eyton, the compiler of the “Herd-Book of Hereford Cattle,” states that he was informed by the family of Mr. Tomkins, that one of the cows “was a grey, and the other a dark red with a spotted face.” The former Mr. T. called *Pigeon* and the latter *Mottle*. It appears that Mr. T. kept two families from these two cows—one of a grey color, called the Pigeon branch, and the other of a red color, with white or mottled face, called the Mottle branch—and they have been continued to this day. The Rev. J. R. Smythies, of Lynch-Court, Herefordshire, a gentleman, who for a long period was distinguished as a breeder of Hereford stock, speaking of the two families alluded to, in a late number of the *Mark-Lane Express*, says—“the grey ones are considered the oldest breed, and by many people, considered the best; from long experience, I am inclined to think they possess more constitution and more quality than the white-faced ones, and generally more size than the mottled-faced ones.”

From the two cows mentioned, Mr. Tomkins bred a large herd; from which he supplied other breeders with choice animals, during his lifetime, and shortly after his death in 1819, the entire stock was disposed of at public auction. The prices obtained deserve notice. Fifty-two animals—among which were twenty-two steers, from calves to two-year-olds, and two heifer-calves,—brought the aggregate sum of £4673 14s.—averaging £99 17s. 6d. ($449.37½ each.) One bull sold to Lord Talbot for £588, and several cows and heifers brought £215 to £273 each. This stock was purchased by breeders in different parts of the kingdom, and laid the foundation of many eminent herds. (See Herd-Book of Hereford Cattle, appendix, pp. 1 to 23.)

Another noted early breeder of Herefords was Mr. Tully, of Huntington, near Hereford. His were chiefly of the grey stock; and Mr. Smythies, in the article above referred to, states that their descendants are still known as “the Huntington breed.”

Mr. Smythies was for forty years, one of the largest breeders of Hereford cattle in England—rearing, as he states about seventy calves yearly. He purchased his first stock in 1802, of Mr. Tully of Clirow, a relative of the before-named gentleman of this name. He was induced to adopt this stock by the recommendation of the celebrated grazier, Mr. J. Westcar, of Creslow, near Aylesbury. Mr. Smythies relates, that meeting Mr. Westcar at the Hereford fair, the latter remarked.—“This is the *fiftieth* October fair I have attended in this town, without missing one. I graze five hundred oxen every year, and the best beasts I ever fed, were bred by Mr. Tully of Huntington, and Mr. Skegrue of Stretton Court, both near Hereford.”

Mr. Smythies closed business in 1843, at which time he sold at public auction, 131 head of cows, heifers and bulls. He had a previous sale in 1823, at which sixty six head of breeding stock were sold. We have not the prices obtained at either sale.

The late Mr. John Price, of Poole-House, Worcestershire, commenced breeding Hereford cattle in 1814, with several animals purchased of Mr. Tomkins above mentioned. He continued to breed on an extensive scale till 1841. In October of that year, he disposed of his stock at public sale. Ninety-nine animals—cows heifers and bulls, brought an aggregate of £5328—averaging £53 16s. 4½d. each. At a previous sale, in 1816, he sold one hundred and twenty-six head of Herefords, comprising fourteen bulls of various ages, six bull calves, one hundred and six breeding cows,

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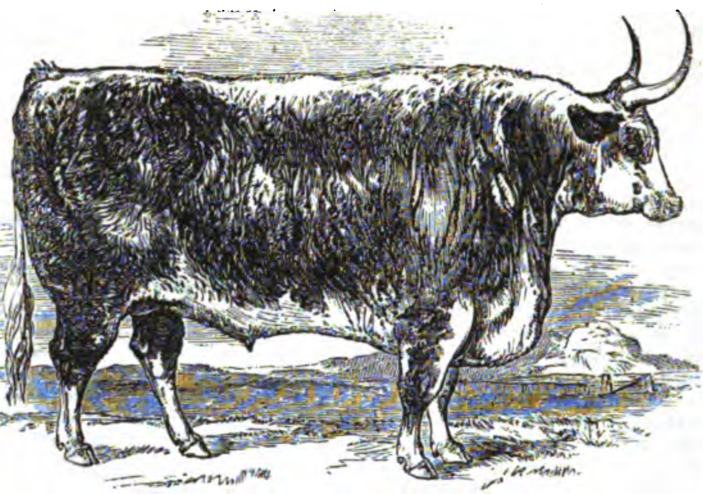
* It has been observed that on spots purposely sheltered from the wind and rain on every side, the quantity of dust that is collected, when *pressed down*, is in three years equal to one line, *or in 36 years, to one inch in thickness*.—Sprengel.



54—HEREFORD OX.

heifers and calves, which together brought £6850 12*s.* 6*d.*—averaging £54 8*s.* 2*d.* each.[*]

We deem it important to state these prices, that it may be seen how they compare with those of other breeds. Numerous other sales of Herefords might be cited, at which prices about as high as the foregoing, were obtained.

Some of the principal breeders of Herefords in England at the present time, are W. F. HOBBS, JOHN and WM. HEWER, Lord TALBOT, Sir H. HOSKYNS, S. ASTON and Sir FRANCIS LAWLEY. In reference to the stock of the two last-mentioned breeders, Mr. SMYTHIES, in the *Mark-Lane Express* of Feb. 5th, last, makes the following challenge in order to test the relative merits of the Short-horns, Devons and Herefords:

"I will show one hundred Hereford beasts, which were the property of Sir Francis Lawley, Bart., on the 1st of January, 1849, and the same number which were the property of Mr. Aston, of Lynch Court, on the same day, against an equal number, the property of any two breeders of Short-horns or Devons in any part of Great Britain, on the same day, for one hundred sovereigns. I am willing to leave the decision to the three judges at the last Smithfield show, two of whom are unknown to me, even by sight."

Mr. S. also makes the following offer:—"I am also ready to place four Hereford calves, on the 1st of May next, in the hands of any respectable grazier in the midland counties, against four Short-horns and four Devons; no calf to be more than four months old on that day; the twelve calves to be turned to grass together, to have nothing but grass till the 20th of October following, then to be put into stalls, and to be fed as the grazier thinks proper; but the food to be weighed to each lot, till the following May, when they shall be again turned to grass, and have nothing but what they get there till the 1st of October; then to be again taken into the stalls, and the food weighed as before; the whole to be shown as extra stock at the Smithfield Show, at the bazaar, and after the show to be slaughtered, the four beasts that pay the best to be the winners."

The predominant characteristic of the Hereford breed of cattle, is a disposition to fatten.[*] It is for the beef chiefly, that they, as well as the "Herd-Book" short-horns, are bred in England. In dairy properties, the Herefords are believed equal to any *high bred* breed—all such breeds being doubtless inferior to some others in which the milking property has received more attention in breeding.

The show of fat cattle by the Smithfield Club, London, is the only exhibition of note in Britain, where the different breeds are brought into direct competition with each other. Here the Herefords and Short-horns have long been rivals, and have contested with various success. In looking over most of the results for a period of thirty-nine years, we think it may be assumed that in the classes for oxen and steers, the Herefords have taken more prizes than any other breed. For the prizes on fat cows, they have been less successful than the Short-horns.

As an example of the success of a single competitor at Smithfield, it may not be amiss to mention that Mr. Westcar, abovementioned, took the first prize in class I., (oxen) in 1810, 1812, 1813, 1814, and 1815. The animals in every case were Herefords. The dead weights of the four first were as follows—quarters, hide and loose tallow included, 2147; 2059; 1953; and 2141 pounds. We have not the weight of the fifth. Mr. Smythies states that Mr. Westcar sold, at different times, twenty Hereford oxen, "for two thousand one hundred and fifty pounds." The statement was proved by an extract from Mr. Westcar's books, giving the date of sale, the name of the butcher they were sold to, and the several sums paid for them. "Six of them," it is said, "were sold in one deal to Mr. Giblet, of Bond-street, for six hundred pounds."

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[*] In 1839, Mr. Price gave a public challenge to show twenty cows and a bull of his own breeding, against the same number of any one person's breeding, and of any breed—open to all England —but it was not accepted

[*] In a paper by E. F. WELLS, published in the *Farmer's Magazine* for February, 1848, the following sensible remarks are made in regard to the properties of Herefords:—"It is allowed on all hands, I believe, that the properties in which Herefords stand pre-eminent among the middle-sized breeds, are in the production of oxen, and their superiority of flesh. On these points there is little chance of their being excelled. It should, however, be borne in mind that the best oxen are not produced from the largest cows, nor is a superior quality of flesh, such as is considered very soft to the touch, with thin skin. It is the union of these two qualities which often characterises the Short-horns; but the Hereford breeders should endeavor to maintain a higher standard of excellence—that for which the best of the breed have always been esteemed—a moderately thick, mellow hide, with a well-apportioned combination of softness with elasticity. A sufficiency of hair is also desirable, and if accompanied with a disposition to curl moderately, it is more in esteem; but that which has a harsh and wiry feel, is objectionable."

The beef of the Herefords is of fine quality, and commands a price in the English markets equal to any except that of the Highland Scotch. The following extract from a late number of the *Agricultural Gazette*, giving the price current at the Smithfield Market, shows about the usual range:

Per stone of eight pounds.	s. d.		s. d.
Best Scots, Herefords, &c.,	4 4	to	4 8
Best Short-horns,	4 2	to	4 6

Youatt says—"there are few cattle more prized in the market than the genuine Herefords." In respect to size, they rank next to the Short-horns. The writer just referred to, observes:—"they fatten to a much greater weight than the Devons, and run from 50 to 70 score—[1,000 to 1,400 lbs.,] the four quarters. A tolerable cow will average 35 to 50 score—[700 to 1,000 lbs.] *** The hide is considerably thicker than that of the Devons, and the beasts are more hardy compared with the Devons, they are shorter in the leg, and also in the carcass; higher, and broader, and heavier in the chine; rounder and wider across the hips, and better covered with fat; the thigh fuller and more muscular, and the shoulders larger and coarser." The latter remark may be true as to the two breeds in general, but most of the Herefords we have seen, have not been coarse in the shoulder.

There have been comparatively but few importations of Herefords to America. The principal one, and that from which the breed has been chiefly disseminated through the country, was that of Messrs. Corning & Sotham, consisting of 5 bulls and 17 cows and heifers, imported in 1840. These were mostly from the herds of Mr. J. Hewer, and Mr. Walker. Mr. C. N. Bement purchased a bull and heifer in 1839. The bull died shortly after, and the cow and her increase were added to the first mentioned herd. Hon. H. Clay, of Kentucky, imported two bulls and two heifers of this breed in 1817. We do not know who was the breeder of this stock, or whether they were of the most esteemed families of Herefords. In an account of them, written by Mr. Clay, published in the *American Farmer*, 1822, he states that the price paid in England for the four, was £105 sterling. From this we should infer that they were not from a herd of the highest repute. He states that one of the bulls died on his journey from Baltimore to Kentucky. We have understood that the increase from these animals was not large. In 1824, Admiral Coffin, of the Royal Navy, presented to the Massachusetts Society for Promoting Agriculture, a Hereford bull and heifer. They were bred by Sir J. G. Cotterel, whose stock was from Mr. Yarworth, and his from Mr. Benj. Tomkins, the first noted breeder of Herefords. The cow never bred. The bull was kept several years by the late Hon. Isaac C. Bates, of Northampton, Mass., and left a valuable progeny.

Besides the above importations, we are informed that Mordecai Hale, Esq., sent some Herefords to Steuben county, N. Y., many years ago. We have no particulars in regard to their importation. [See remarks of Judge Leland, in *The Cultivator* for 1845, p. 109.]

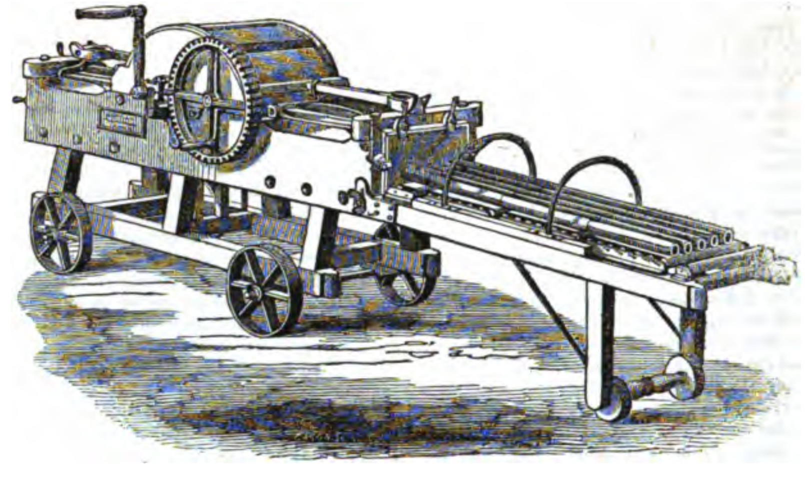
As to the success of the Herefords in this country, we believe they have given general satisfaction to those who have given them a fair trial. They have good constitutions, thrive readily, and are more active than any other cattle of so large a size. But few of the full bloods have as yet been fattened or worked. The half bloods show a decided superiority over the common stock of the country, for these purposes. In respect to dairy properties, we think they have, as compared with other breeds, especially "Herd-Book" Short-horns, proved better here than some anticipated. From what we have seen, we think it would not be difficult to breed good dairy stock from Herefords; though it is probable, that the development of their dairy qualities, would be to some extent, a sacrifice of the disposition to fatten. We know that good dairy cows are met with in this breed. Their milk is generally rich, and like that of the Devons, yields a large proportion of the best of butter. In 1839, the Royal Agricultural Society offered a prize of fifteen sovereigns for the cow "best calculated for dairy purposes"—the competition being open to all breeds in the kingdom. This prize was taken by the Rev. J. R. Smythies, for a Hereford. The second prize was awarded for a Short-horn. Several other Herefords were entered for the prize—a circumstance which proves that cows were to be had of this breed, in the dairy qualities of which, their owners had such confidence, as to show them against any others. This was the only occasion on which the Royal Society has brought the different breeds into competition with each other—the class having been from the time abolished.

Mr. Smythies, in a late communication in the *Mark-Lane Express*, before referred to, says—"I have seen Hereford cows milk well, and had one myself which made eleven pounds of butter a week for three months." This may have been the cow on which he received the above mentioned prize, though this is not stated. But he observes that beef is much more profitable in his section than dairy products, and on this account "it is not an object with a Hereford breeder to have good milkers."

The milking property in cattle, undoubtedly depends on the object and *skill* of the breeder. The late John Price, in a communication published in the *Farmer's Magazine* for January, 1841, observes:—"Experience has taught me, that *no animals* possessing form and other requisites, giving them a *great disposition to fatten*, are calculated to give much milk; nor is it reasonable to suppose they should; it would be in direct opposition to the law of nature. Had I *willed* it twenty years ago, my belief is, that I could, by this time, have bred twenty cows, purely from my own herd, [Herefords,] which should have given a sufficient quantity of milk for (*paying*) dairy purposes; and I am equally confident that, in the same period, I could have bred a similar number, that would not at any time have given twenty quarts of milk per day *among them*. I feel confident that I could effect either of these objects much more easily and certainly than I could blend the two properties in the same animal,—retaining also the form and quality best adapted to live hard and feed—[fatten.]"

But it is not to be expected that the Herefords, or any other breed of cattle, will take the place of all other breeds in all situations. On this point, the observation of C. Hilliard, in his "*Practical Farming and Grazing*," is worthy of notice:—"There are four different breeds of cattle that are, for different soils, situations and purposes, superior to any other cattle in the world. The Durhams, (or as they are commonly called, the improved short-horns,) and the Herefords, for the best pastures; the North Devons for the short pasture on warm light soils; and the Scots for the wild and cold pasturage. These four breeds of cattle will ever remain pure, because it is thought that they cannot be permanently benefitted by crossing with any other breed."

Cements.—Soak isinglass in water till it is soft, then dissolve it in the smallest quantity of proof-spirits, with the aid of a gentle heat. In 2 ounces of this dissolve 10 grains of ammoniacum, and while still liquid, add a solution-of half a drachm of mastich in three drachms of rectified spirits, stir them well together, and put the mixture into small bottles, which are to be kept covered. This cement, when used, is to be liqnified by putting the bottle into hot water.



58—SCRAGG'S PATENT TILE MACHINE.

Drainage of Land.

The principal object of draining is to take away surplus water, but in effecting this, other important benefits are secured. It is obvious that a larger quantity of water in the soil than is required for the support of plants, is injurious. It is injurious in various ways. That wet lands are "cold and sour," is a common expression, and an acquaintance with the principles which this condition of the soil involves, shows that the popular idea is correct. It has been repeatedly proved that evaporation produces coldness,—that in the exhalation of moisture, heat is also carried off,—and this is one of the reasons why a wet soil is really a cold one. That such a soil is also sour, is proved by the fact that vegetable matters form acids, when decomposed in water. The sourness of peat may be taken as an example. Prof. Johnston observes—"When [soils are] soaked in water, their vegetable matter either decomposes very slowly, or produces acid compounds, more or less injurious to the plant, and even exerts injurious chemical re-actions upon the earthy and saline constituents of the soil."

One of the first objects in the production of any plant, is to secure a temperature congenial to its habits. Every person may have observed that vegetation makes no progress till the weather becomes sufficiently warm. Different species of plants require different degrees of heat; but as a general rule, those which grow in the lowest temperature, are least valuable.

The effect of drainage has been found highly favorable in raising the temperature of soils. Experiments have been made which proved that, at seven inches below the surface, the average degree of heat for thirty-six successive days, on a soil which had been underdrained and pulverised, was ten degrees higher than on a soil precisely similar, that had not been drained and worked. [See experiments of Mr. Parkes, *Journal Royal Ag. Society* vol. v. pp. 141, 143.] The more rapid growth and perfect maturity of crops on drained lands, is doubtless attributable, in a considerable degree, to the higher temperature thus attained, and is an evidence of the great value of drainage in high latitudes, where, from the shortness of the season, the results of agricultural labors are peculiarly uncertain.

It may be safely assumed that draining is the basis of the great improvement which has taken place in British husbandry within the last fifty years. In America, the practice of draining systematically, can hardly be said to have been introduced. Various trials have, however, been made in different parts of the country; the subject is beginning to attract great attention, and we expect, shortly, to see the business carried on largely and profitably.

It has been objected that drainage is less necessary here than in Britain—that in our drier climate, crops are more liable to injury from drouth than moisture. To this it may be replied, that proper drainage, with a thorough working of the soil, is the best possible protection against drouth. A little observation will convince any person that those lands are most affected by drouth, which at some seasons of the year are too wet; of this class are stiff clays, and soils with a "hard pan" subsoil. Clays, which are not drained, keep the water so long on the surface, that the soil "runs together" and forms a mortar, which, when the water has evaporated, becomes like sun burnt bricks—unworkable, and totally unfit for the growth of plants. On the hard-pan soil, the surface is completely saturated with water in spring, or in wet weather, the compact subsoil not permitting it to soak into the earth. In both cases, the workable soil is usually thin, and as soon as a drouth comes on, the plants droop, and "because they have not much root, they wither away." Crops on such soils are very precarious; the only bed for their roots at any time, is the little portion moved by the plow, and it is but a small part of the time, comparatively, that even this is wholly available to them—it being almost always either too wet or too dry. The roots cannot, perhaps, penetrate the hard subsoil, or if they do, are liable to be brought in contact with substances more or less poisonous to vegetation. The effect of drainage in such cases, is to increase the depth of the soil, to render it more permeable to the roots of plants, and less liable to be affected by drouth.

The first action of the drain is to take away the water from that part of the soil with which it is in direct contact. A contraction of the soil soon follows, and cracks are formed, beginning at the drain, and extending laterally and vertically, which admit the percolation of water and conduct it into the drain. When the soil is thus brought into a state which allows the water readily to pass through it, the former difficulties of its running together and baking, are obviated; the soil remains open and friable, and plants are protected against extremes of wet and drouth.

It is a fact that plants suffer less from drouth on a friable soil, than on a compact one; as may be seen by a comparison of crops on clay and loam. This results from two causes. The roots of plants have more scope in a loose soil, and are thus enabled to draw support from a greater source. A mellow soil is also most moist, in time of drouth—pulverization favoring the ascent of moisture from below, as well as its absorption from the atmosphere. A heap of moulding sand will seldom dry but to a little depth, while hard clay in the same situation will become almost destitute of moisture.

Professor **Norton**, in his lecture on draining given at Hartford in 1847, states that during the extreme drouth which prevailed in Scotland in 1845, it was found that in all ordinary cases, the crops on drained land withstood the drouth much better than those on undrained, "because of the greater depth of soil available to the plant." And he adds that "it is now a proposition regarded among the best English and Scotch farmers as completely established, that drained land is not only better in wet seasons, but in dry seasons also." [Cultivator for Jan. 1848.]

The full benefit of *subsoil plowing*, on tenaceous soils, cannot be fully obtained without thorough draining. If the water is not drawn off, it soon packs the soil together again, after the plow has been used. Prof. Norton states, that where drains have been laid at proper distances in hard-pan soils, the air and rains soon break up the crust, the water filters through into the drain, and the ocheous deposit is gradually dissolved and carried away. Air and heat being thus admitted into the soil, the noxious compounds which had there formed are decomposed, and wholesome food for plants is produced.

In regard to the question—Where is it proper to make drains? it may be said that they are necessary wherever the character of the natural vegetation indicates water. Rushes, ferns, and what are generally called water grasses, always grow where there is too much water in the soil, at certain seasons of the year, for the growth of the more valuable plants. When the soil is properly drained, these aquatic plants can no longer live. There is scarcely a field on any common farm, that has not spots that would be benefited by the drain, even for grass, and still more for grain and vegetables. The farmer thinks, perhaps, that as the produce of grass is apparently large, nothing is wanting. But it must be recollected that the produce of wet land is of less weight and value in proportion to its bulk, than that of dry land. If the land is in pasture, animals will reject the herbage that grows on these damp spots, till forced by hunger to eat it. If the grass is made into hay, the same reluctance of animals to eat it is manifested, and their loss of flesh when kept on it, is evidence of its want of nutriment. Prof. Norton states that analyses of samples of grain from two fields, one drained and the other undrained, showed a decided inferiority in that from the undrained field. It is plain, therefore, that draining not only increases the quantity of produce, but also improves the quality.

Another great advantage of draining, is the prevention of grain and grass from being "winter-killed." This effect is caused by sudden freezing of the ground while the surface is wet. Land on which wheat and rye have been very uncertain from this cause, are found to produce the best crops after having been thoroughly underdrained.

But the advantages of draining in a *sanatory* view, are in many instances of the highest importance. It is well known that stagnant water is very prejudicial to health. In those sections of our country which are particularly subject to bilious fevers, and fever and ague, the soil usually abounds in vegetable matter, and during wet seasons is flooded with water, which frequently covers a large portion of the surface for several days or weeks, and finally goes off chiefly by evaporation. Sad experience has taught the inhabitants of those sections to regard such floodings as the precursors of sickness. Similar causes have produced like effects in Europe. An eminent physician, Dr. **McNab**, observes—"After twenty-six years' practice, I venture to add, that I have scarcely ever had a case of typhus fever in a malignant form, without discovering some stagnant drain, or over charged cesspool, or some other manifest cause of malaria, in the immediate residence of the patient." Another writer observes in reference to the situation of a neighborhood where fevers had prevailed—"Most of the houses surround an undrained common, full of pools of stagnant water, that in the winter season overflow. In the summer months, and greater part of the spring and autumn, they are stagnant, and undoubtedly, a fruitful source of malaria."

The benefits of drainage on the health of the inhabitants of wet and marshy districts, have been striking. An English report on this subject, says in reference to one district, where the inhabitants were formerly exposed to the malaria of marshy lands,—"for the last few years, *owing to the excellent plan of draining*, very few diseases have occurred that can be said to be produced by malaria. There is very little ague, scarcely any continued fever, and a case of typhus fever has not been known along the borders for the last three or four years. Some years back, a great portion of the parishes adjoining these marshes, was under water from the end of autumn to the early part of the following spring; then fevers and agues of all characters prevailed to a very great extent." Much testimony of a character like this, has been obtained in Britain, and leaves no doubt of the great benefits of drainage in regard to health.

Several diseases of domestic animals, such as "liver-complaint" in cattle, and "rot" in sheep, are known to be connected with the same causes which produce the diseases in man above mentioned. The effects of malaria and watery succulent herbage, in producing the rot, have long been known. As might be expected, the health of sheep and cattle has been benefitted by drainage to an equal or greater degree than that of the human race. C. W. **Johnson** states that the rural population of drained districts in England, have often remarked the favorable effects of drainage on the health and improvement of animals, by which losses of stock have been prevented to a great extent.

There is no insuperable obstacle to the drainage of those sections of this country which have heretofore been so subject to particular diseases. A gentleman of great experience in draining, states that drains will draw effectively, if properly made, where there is a descent of only four inches to the mile. There are few cases where a much greater fall cannot be had. How immense would be the benefits which would follow from the adoption of a thorough system of draining, in those sections!

Modes of forming drains.—Drains have been made in various ways. In clayey soils they have been formed by digging a trench to the required depth, and then placing a block of wood four inches square in the bottom, around which the soil is rammed hard—the timber being then drawn along, and the same operation repeated. The subsequent contraction of the clay, allows the water to enter the cavity thus formed. Such drains operate well for a time, but are not, probably, very lasting.

Stones have long been used for the construction of drains. They are made both with and without an eye, or open space, and if rightly constructed, are considered as efficient as any. It has been found that small stones are best for this purpose, and in England and and Scotland they are broken to about the size ordinarily used for McAdam roads, or so small that they will pass through a ring two and a-half inches in diameter.

Prof. Norton says—" The bottom of the [stone] drain should be about six inches across, and from six to eight inches in depth of these small stones should be thrown in. Turfs cut thin and very carefully so as exactly to fit, should be laid on the top, over-lapping each other, and the *earth rammed down* hard, as the object is to prevent entirely, the access of water from above; it should all filter in at the sides, for if it finds an entrance at the top, sand and small stones will wash down, and eventually choke the drain."

But the principal operations of draining in Britain, for the last few years, have been with tiles made of clay, and burnt after the manner of burning bricks. These could be used with more economy, especially in districts where stones were scarce, the expense of transporting the former, being much less. They have been made of various forms. The curved or " horse-shoe " shape was first adopted. The tiles were made in lengths of fourteen to sixteen inches, and three to four inches wide, with " soles " for the tiles to rest on when laid in the drain. The manner of making drains with these, has so frequently been described in our pages, that nothing further seems necessary in regard to them. Of late, another form, called " pipe " tile, has been introduced. We have never seen any of this kind; but in regard to the manner of making them, and their operation, we presume they cannot be better described than in the language of Prof. Norton, who during his residence in England and Scotland, made drainage a subject of particular investigation. We copy from his lecture on draining, before referred to in this article:

"It is a simple round pipe, made in lengths like the first and for the cross drains of not more than an inch and a half in the diameter of the bore. These can be made much cheaper than the other kind, as they are smaller, and all in one piece. They are not more than half the weight of the old fashioned tile and sole, and therefore an additional saving is effected on the transportation. The trench for their reception is also much smaller, being at the top just wide enough to allow the trencher to work, and cut at the bottom with a narrow tool, to exactly the proper size for the reception of the pipe. The pieces are simply laid end to end, and wedged with small stones when necessary. The water finds its way in at the joints. Many have expressed doubts as to the operation of these drains, thinking that water would scarcely penetrate into so small a channel, through such minute apertures. No difficulty has been experienced in any case. One gentleman, residing in the south of England, who has employed these small pipe tiles in draining exceedingly stiff clays, laying them at the depth of three feet, and ramming the clay hard down, offered a premium of £100 to any person who would keep the water out of them. These tiles, of both varieties, are made by machinery. The clay is worked in an ordinary pug mill, such as used in brick-making, care being taken that no stones are present; it is then forced through a die of a circular or horse-shoe shape, according to the kind of tile intended to be made. It passes through in a continuous stream, which is cut off into the proper lengths by hand, or by a little apparatus connected with the machine."

It affords us pleasure to state that Hon. **John Delafield**, of Oaklands Farm, near Geneva, has lately imported from England, one of the most approved machines for making tiles. It is *Scragg's* patent, and is represented by the cut at the head of this article. It has received two prizes of £20 each, from the Royal Agricultural Society, and the Highland Agricultural Society as the best tile machine exhibited at their shows. We have received from Mr. D. the following remarks in reference to the machine:—" It was made by Scragg, of Cheshire, England. It is of the largest size and embraces every improvement to the present time. This machine works the clay and screens it, so as to remove all stones and other substances—it is then carried forward by the machinery, and passed through dies of any required form or pattern, and delivered at the end of the table, ready for the kiln. The dies which accompany the machine, will produce drain pipes of 1, 1½, 2, 2½, 3, 5, and 6 inches bore. Horse-shoe tiles, rising 2½ and 4 inches, with soles to match the tiles—semi-cylinders of 8 and 11 inches in diameter. A pattern has also arrived for a new form of pipe, with a foot attached. This is a new feature, and, as it seems, an improvement. The machine is arranged also for making ridge tiles and pan tiles for roofing.

" As soon as the machine is put into work, I will send a specimen of each tile to the Agricultural Rooms. It is probable that it may be in operation by June, and then drain tiles will be furnished for not over ten dollars per 1000, and I hope in good time to see them delivered for a less cost. We cannot yet form an accurate calculation, but we are sure not to exceed $10 per 1000.

" I hope to cause the works to be erected close to the canal, that a ready delivery may be made to distant farmers.

" In procuring this machine, I have been much favored by the gentlemanly attentions of Mr. John Girdwood, of Chirk Castle, Scotland, who interested himself much and earnestly in the erection of this particular kind. I am also under obligations to Prof. Norton, who first brought this machine into notice in this country in one of his lectures, and through whom I received an introduction to Mr. Girdwood."

As to the *expense of drainage* in this country, no precise statements can at present be made. When machines for making tiles shall have been brought into full operation here, and all other branches of the business become fully understood and systematised, the cost will be reduced. But Mr. **Johnston**, near Geneva, whose draining operations have been several times spoken of in our pages, states that at the cost which he has incurred, twenty-eight cents per rod, the investment is the most profitable he has made on his farm.

We are not prepared to lay down any definite rules as to the *distance apart* which drains should be laid. This must depend on the condition of the land. In many fields drains are only needed in particular situations or wet spots, other portions being sufficiently dry. Where the soil is uniformly wet, or is generally injured by water in the subsoil, the rule which is followed in Britain will probably be found best, and that, according to Prof. Norton, is to lay the drains at eighteen to twenty-four feet apart, which he says will drain the stiffest and wettest land.

The *depth* of drains, it is generally agreed, should not be less than two and a-half feet. They should be so deep that there is no danger of their being affected by any operations on the the soil, either in using the common plow or the subsoil plow. When the tiles are once laid, and the earth is properly fixed around them, they should never be disturbed, except to remedy some obstruction.

Culture of Grapes in Ohio.—It is stated in the Report of the Agricultural society for the county of Hamilton, O., that not less than five hundred bushels of Catawba and Isabella grapes were sold in Cincinnati during last season, for " table use "—the price $3 to $4 per bushel. But the quantity sold for the table is said to have been inconsiderable, compared with the quantity used in the manufacture of wine. The grape culture is profitably carried on in the vicinity of Cincinnati, on the roughest hill-sides, which are of but little value for the ordinary purposes of agriculture.

Improved Implements.

System, Order, and Economy.

An evil of great magnitude seems to pervade and influence too many farmers, and that is the employment of an insufficient force to perform their *duty* at the proper season, and with economy of time. The oft repeated excuses for such neglect, and for the losses flowing from it, are, too much land in occupancy, or want of means, alias capital. Doubtless there are instances where such causes do operate harshly, but they are probably exceptions only, and by no means a general feature. As a general rule, the due cultivation of one hundred acres, requires a permanent steady application of the force or labor of one man, a lad, and one good team of horses. With less power, it cannot be maintained in good condition, or continue profitable. This proportion of force is indispensable for any larger quantity of land. The owner of a farm of one hundred acres, if an able workman, needs the addition of but one laborer if studying the closest economy; but a little reflection will convince us that two laborers will be more effective, and provide against the contingencies of sickness, or the casual calls from the farm to the neighboring markets, or occasional public duties, to which every man is called to contribute a portion of his time. Judging from the county best known to me, the great bulk of our state is divided into farms of about 150 acres, or less,—a size quite easy of control by a proprietor, with two laborers, rendering the excuse of too much land in occupancy, as untrue and invalid.

The next excuse, the want of capital, is equally unsound; for no man ever pays wages out of his capital or principal. Wages are ever derived from profits, and every farmer most naturally enlarges or diminishes the rate of wages, according to the increase or decrease of his profits. This is a law we all follow, though we do not all study it, or consider its bearings upon our profession, whether farmers, merchants, or manufacturers.

If profits cease, we cease to pursue the vocation, and turn our attention and means to objects of greater demand among our fellow men.

But at no time in the history of man, did the cultivation of the earth, properly pursued, ever cease to afford abundant profit to the capital employed, and sufficient wages to all engaged in it. I am aware that this position will be denied by men engaged in other pursuits, and am willing to admit that some portions of the earth do not exhibit the feature above claimed; but the cause for such an exception, is an artificial interference with the farmer, forcing him from his natural position to meet the exigencies or desires of some other class of his fellow beings. Happily with us, the position I claim for the American farmer is well sustained, and needs no other proof, than the existing prosperity of the whole breadth of our land,—its uniform, steady, onward increase from year to year, since the dawn of our freedom.

I have been led to these remarks, because the above excuses are offered as cause to adhere to the plow, the harrow, the scythe, and the flail, as the only absolutely necessary implements for the farm.

Has it not been proved already, that the work accomplished in former days, is now performed by other implements, or improvements on old ones, with much *less labor* and in much *less time?* Is not our work generally *better* done at this day, by all who use these improved implements? Surely it is so, as has been proved by the economy with which wheat can be raised, and as we hope further to prove, in the raising of Indian corn.

Let us now proceed with the examination of other farm implements and machinery, testing their economy.

There is music in the sound of the flail, but its notes are seldom heard since the introduction of the *Threshing Machine*. It is more than one hundred years ago, (1732) that the first machine for threshing grain was patented, by a worthy Scotch farmer. All however, that was claimed for it was, that by its use, one man would do the usual work of six men. In 1755 another and better machine was produced in Scotland. In 1772 the English began to feel the necessity to save labor and time, and a machine was produced by Mr. Smart; and in 1785, a London mechanic brought forward an improvement which was more successful than its predecessors, though far from perfect; others followed rapidly until the year 1790—93, when an American farmer, Mr. Ampthill, *of Virginia*, invented a machine for threshing grain by moveable rods, and this machine was introduced favorably into England.

Prior to 1790, an ingenious Scotch mechanic had conceived the plan of passing the grain between rollers, which probably led to the improved machine now so extensively used in this country; nevertheless, it was left for American ingenuity to supply the English farmer with the more perfect machine, for it is the American design now mostly used, as patented by Jas. Atkinson, of Braham Hall, in Yorkshire. It is the application of spikes on the revolving drum, that is peculiarly American. The use of the threshing machine in this State, does not, I believe, extend beyond the year 1822, or thereabouts, when a very imperfect one was put up in Saratoga county, brought from New Hampshire. Not operating with the desired success of the proprietor, it was transferred to Mr. T. D. Burrall, a farmer at Geneva, in Ontario county. He being a skillful and scientific mechanic, as well as farmer, very soon improved upon its mechanism, and in 1830, gave to us the machine which can thresh for us 300 bushels per day or more. A more conclusive proof of excellence need not be required than the fact that, since 1830, full four thousand of *these* Threshing Machines, have been put into operation in the United States. They are made of various sizes; the most convenient for the farmer, being capable of threshing about 200 bushels per day, with the power of four horses.

Having for several years used one of these threshing machines, I compute the cost of threshing and cleaning my wheat, (both operations being performed by the same force or power,) as follows:

One man to feed the machine, at	39	*cts.*	per day
do to supply the feeder,..	38	"	"
do to pitch from the mow,	34½	"	"
do to deliver the straw,..	32	"	"
do to attend the fanning mill, generally done by self,	50	"	"
Per day,.....	$1 93½	for labor.	
Four horses and a driver,....	2 50		
	$4 43½	pr day.	

Wheat is threshed at an easy pace, delivering 200 bushels (often more) per day, which at the above rates, makes the cost per bushel to be two cents, 21.1000.

It should be remarked that the rates of wages above named are the actual rates paid; the work being done by yearly hands, whose wages amount per day to the sums stated.

Itinerant threshing machines, can generally be hired to thresh for farmers who do not possess these implements. The charge for threshing in such cases, is from four to five cents per bushel, and the supply by the farmer, of all necessary horses except two, and all the necessary labor except the owner, who commonly feeds his own machine. These machines are generally used on the field, the wheat sheaves are brought from the shocks, and the straw is left in numberless instances occupying the same resting place season after season.

The economy of the threshing machine is readily understood, when we compare the cost per bushel as above stated, with the cost per bushel when threshed by the flail, and cleaned through the fanning mill. There are incidental benefits, also, of much value, such as prompt separation for market before winter sets in,—saving in weight—no destruction by rats and vermin,—no loss of interest;—it gives abundant time to house or stack the straw for our stock.

In all estimates for work done by our machines, we ought to charge about 10 per cent. on the cost of the machinery, for its wear and tear annually; and in this case, we must distribute this charge rateably between the crops of wheat, barley, rye and oats, or whatever crops are subjected to its operation.

Thus far, it is hoped that farming, when conducted under a system where the labor is performed by well-constructed machines, or implements, is proved to be economical, and necessarily more profitable. After the consideration of a few more important implements, I propose to enter upon the easy task of censuring the *want of system*; but in such a manner, I hope, as to create a desire for order and method. AGRICOLA. *Seneca Co., May*, 1849.

The Season.

The Winter and the April snow storm.

EDS. CULTIVATOR—The early part of November, 1848, will long be remembered and often quoted by the oldest inhabitant for the severity of its frosts. In many places the mercury fell to 2° and 3° below zero, and the ground froze as solid as though midwinter had driven the mellowness of autumn into a hopeless grave. Dark clouds floated over the atmosphere, and frequent snow squalls fully indicated that the power of the northern storm-king was in no way relaxed through the kind influences of summer. About the middle of the month the earth was whitened with its wintry vestment, and though the cold was less severe, the snow remained upon the ground for several days. The evening of the 17th is memorable for the luminous and beauiful Aurora Borealis which continued to increase in interest until ten o'clock. The streamers were of unusual brilliancy, and followed each other in such rapid succession that they gave a life-like appearance to the whole northern horizon. But what was most interesting in this night's phenomena was the "*Corona*," or union of beams at a common centre, but entirely separate from the long streamers of the north. Although light clouds were floating in the atmosphere and the night was moonless, the degree of light was much greater than that of the full harvest moon. Indeed, the power of light was so great that a person might have seen to pick up a pin or a needle in the streets without difficulty. The greatest degree of light occurred about half past nine o'clock.

Whether these lights have any influence on the future state of the atmosphere, or are in any way concerned in the production of storms, is a point of some importance in the economy of meteorological operations, and we rejoice that men of leisure and science in different parts of our country have the matter in investigation. It will be admitted by all any way observant, we believe, that atmospheric changes, and often very great ones, follow the appearance of these beautiful corruscations. When seen in autumn, the season when they are most commonly visible, they have become the proverbial heralds of cold. Cool weather followed their appearance in this instance, though of a more severe nature than that which preceded them.

Early in December the bands of this premature winter gave way, the frost broke up, the ground settled, and everything savored too much of spring. The amount of freezing in the month was very limited, and many farmers plowed as convenience dictated, until the 20th of the month. Sheep refused hay until that time, and neat cattle preferred rambling abroad to the confinement of the yard. The sun shone in mildness, and vegetation in many instances, started into new life. On the night of the 22d, snow fell on the unfrozen earth to the depth of six inches, and an increasing coolness of atmosphere was the consequence. The night of the 23d, was the coldest thus far experienced in the season, with fresh wind from the northwest; 24th, wind changes to southwest, and blew a searching chilling gale; 25, warm and thawy in the morning, with a heavy driving rain in the afternoon, which spoiled the sleighing. At evening, wind changed to the northwest and blew a heavy gale for 24 hours; 27th, snow commenced falling at noon from north, and continued until it fell four inches; 29th, snow again to the depth of 5 inches from the south, which again makes the sleighing fine.

January 1, cool with a light breeze from the N. W.; 2, tremendous blow which piled the snow in mountains along the fences and in the highways, after which it continues cold for several days. A thaw came on the 22d, which spoiled the sleighing in places where the snow lay as it fell, or was partially blown off; 24th, the weather grows cold again.

February was a month of unparalleled severity. But few mornings in that month, was the mercury standing above zero, while in many instances, it sunk to 10° and 12°, and in one or two to 20°. It was a month of uniform pinching cold, attended with but few storms, but of uniform good sleighing.

March was of a lamb-like character through its duration, cool but not blustering. South winds and fogs dissolved the snow rapidly about the 20th, and by the close of the month, the ground was nearly naked even where the deepest drifts had accumulated in the storms of winter. A light snow of some three or four inches in depth, fell towards the close of the month, but with the mud beneath and the sunshine above, it was soon dissolved.

April came in with mildness, and the sunshine and dry winds argued that the reign of mud would soon be past. The 5th was a warm, smoky, spring-like day, and the merry birds sang sweetly in its sunshine. On the 6th, it changed to cooler; 10th, mild and agreeable, plowing commenced on warm dry lands; 12th, cold with dark clouds flitting from northwest; 14th, colder weather comes on, dark heavy clouds overspread the horizon, giving frequent squalls of snow, attended by a high northwest wind; so intense is the cold that the ground begins to freeze at 2 o'clock, P. M.; at night, freezes hard, so that the rumbling of a wagon is loud and heavy. 15th, wind continues high through the day, with lighter clouds, which give frequent squalls; the ground did not thaw at all that day, and small streams were frozen over. 16th, a dark murky day, with very frequent squalls, wind high from northwest; 17th, clear with a keen air, and the sun shining faintly, as if obscured by snow; 18, stiff breeze from the southeast, frost nearly out of the ground at noon; clouds heavy; at 4 o'clock, P. M., commences raining, with the wind high; at ten minutes past 5 o'clock, wind changes to northeast, and snow commences falling moderately; continues to snow through the evening, but melts as fast as it falls; at nine o'clock on the morning of the 19th, snow measures eight inches deep on a level, and continues to fall rapid, until eleven, after which the fall in a measure subsides; at 3 P. M., done snowing, though the wind continues northeast, mild, snow wasting.

It may be fairly estimated that in this storm, more than half the snow melted as it fell, and that, had it all been on the ground at once, the depth could not have been less than 18 inches, which would probably make it the heaviest snow of the season. Although the trees were heavily borne down with their burthens, it is fortunate that vegetation was in no instance sufficiently advanced to be injured by its effects. It is, on the 20th, rapidly wasting, though checked in its departure by a cool northwest breeze, clouds, and the prospect of a frosty night to prolong its unwelcome visit tomorrow.

Although the past winter as has been shown, has exhibited a December of a mildness suited to a more southern latitude, and a February of almost polar severity, and many fears were awakened that sad effects would result from the two extremes, especially to our fruits, the early indications of spring revived the hope that no anticipated evils of this nature would be realised. Previous to the late storm and cold, the buds of the peach and plum appeared to possess a uniform appearance of healthful vitality. Grass and winter grain also, before being pinched by the cold dry winds, looked fair and promising.

In a season of so mixed a temperature, the farmer will naturally fear for the safety and healthfulness of his domestic animals, but all kinds of stock, unless it be in a few instances where they commenced the winter in leanness, or have failed of receiving the kind attention which is their due from those who should be happy in administering to their comfort, come out in healthful thriftiness, an ample compensation for all the labor which has been bestowed in their behalf. Wm. Bacon. *Richmond, Mass., April* 21, 1849.

The Veterinary Department.

Docking and Castrating Lambs.

Eds. Cultivator—As the time is at hand to attend to docking and castrating lambs, I will give you my method of performing that operation.

When the lambs are from one to two weeks old, and the weather is good, I drive up my ewes and lambs to the barn-yard, in the afternoon, towards sunset; put them in a close yard, take out all the lambs. Put the lambs in a small pen, or on the barn floor; then let the ewes out in the barn-yard, which should be well littered with straw. Have a boy to catch the lambs; hand them to another hand, who lets them stand on their feet. I take the tail in my left hand, hold it out straight, have a good shoe knife, and cut off the tail as close as suits fancy. I find this method quicker and better than a chisel and block. Then mark the ear and let the lamb go, keeping them in the yard over night.

In the course of a week or two, bring up the ewes and lambs again. Put them in a close pen; select out the lambs; let the ewe lambs go; put the ram lambs in a pen or on a barn floor. After the lambs are all taken out, let the ewes into the yard. Remember to have it well covered with dry straw. Have a boy to catch the ram lambs, place a good hand on a low bench, who should take the lamb on his lap; hold him by his fore and hind legs. The operator will soon find in what position the lamb should be held. I take my knife, cut off about half the pouch, pull out the testicle, and set down the lamb. The mother comes up to meet him; he soon lays down, consequently soon stops bleeding. The next morning I let them out. The lamb will go off as smart as if nothing had occured. There is more danger from docking than altering. To perform both operations at the same time is too severe.

I will give my reason for choosing the evening instead of the morning, which is the usual time for altering. If you perform the operation in the morning, the ewes are hungry, and ramble about for food, the poor lamb will drag along in pain, and continue bleeding, from the exercise. Reverse the time, and the ewes and lambs lie down and continue quiet all night, and the bleeding soon stops. O. F. M. *Wheeler, Steuben Co., N. Y., April*, 1849.

Cattle that have eaten Apples.

Eds. Cultivator—I had a lot of cows break into an orchard, and soon after they had eaten all the apples they wanted, they were discovered, and salt was given them, of which they partook freely. Not one was injured. Afterwards I had a lot of steers break in and gorge themselves with apples in the same way as the cows had done, and I gave them salt with the like results. The effect of the salt was, I presume, to retard fermentation, and operate on the bowels as a cathartic. Whether it would always have the same effect, I cannot say, but it is worth a trial. Abraham Wanzer. *Sherman, Fairfield County, Conn.*, 1849.

Cure for Foul in the Foot.

Having a cow that had been troubled with this disease for a long time, and after applying numerous remedies without any apparent success,—the foot becoming very putrid, I applied for three successive days, a strong solution of copperas once in each day—after which I applied for a few days, strong pork brine, and a complete cure was effected. F. E. Stow. *Braceville, O., Feb.* 26, 1849.

Cure of Heaves in Horses.

Eds. Cultivator—Pick or gather the buds or sprouts of the white pine, in the spring, say in May, in most parts of the United States. They should be gathered when young and tender, being from four to eight inches long. They can be cured or dried, and are then in readiness at all times. I used from two to three quarts of the buds when green, to about three gallons of water, and let them simmer or boil until I thought their strength was mostly in the liquid. When cool, I gave the horse nearly a quart daily, for ten days, which proved a perfect cure.

The horse was unable to work before administering the above, and at present there is not a better horse in the land for business. The cure was effected in June, 1845.

I further recommend to all persons troubled with pain in the chest or side, to use the above liquid, sweetened with loaf sugar. I have had more benefit from this medicine for pain in the side and breast, than anything I have ever used. John D. Spencer. *Herkimer, N. Y.*

Bone Meal for Cows.

It may have been frequently noticed that cows, while giving milk, evince a disposition to eat bones. The appetite is sometimes very strong for them; indeed so voracious are some cows that they will leave all other food for the sake of obtaining bones, which they will chew by the hour together. This apparently morbid propensity is accounted for by the following theory:—Chemical analysis proves that milk contains bone; and it is hence inferred that the food of the cow should contain the elements of bone, in order to produce milk of proper quality, or that which is capable of affording due support to all parts of the system. If the food is destitute of any of the essential principles of milk, the effort of nature to perfect this fluid, may occasion a drawback on some of the bodily tissues, and the substance of the bones and muscles may be carried off in the milk. The bones from this cause become weakened, and are unable to support the body. This effect is sometimes called the "bone disease." Prof. Johnston, several years since, suggested that *bone meal* fed to cows, would be found useful in such cases. A late number of the *Massachusetts Plowman* states that a number of farmers have tried this, and report that they have found it an effectual remedy.

Land which has been long pastured by milch cows, has been found to become so much exhausted of phosphate of lime—the earthy matter of bones—that the milk was deficient in this principle, and the cows became weak in their frames, and unhealthy. On manuring the land with bones and with phosphate of lime, the composition of the herbage again became perfect, and the cows were strong, and gave good and nourishing milk.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

The American Fruit Culturist.

This new work, having been delayed beyond the time announced for its appearance, it seems necessary to state, that the late severe illness of the author when it was nearly completed having arrested its progress thro' the press, it is now concluded, in order to make it as correct and complete as possible, to defer its publication till near the commencement of another fruit season, or on the first of August.

Fruits in Ohio and adverse Soils.

The Third Annual Report of the Ohio Board of Agriculture, an octavo pamphlet of 220 pages, for which we are indebted to the kindness of M. B. Bateham, mostly occupied with valuable agricultural matter, contains some very interesting reports on the cultivation of fruit in Ohio.

The unusually diversified soil of the state, so far as it affects the success of different varieties of fruit in different localities, is thus spoken of by C. Springer, of Muskingum county:—

"The geological arrangements of the state, especially from the eastern to the middle and southern borders, are such as to have a great influence upon this subject. The various strata lie dipping in a direction a little south of east, and of course are perpetually cropping out, bringing to the surface new formations and combinations of clay and minerals, all of which according to their character, very seriously affect the welfare of fruits. And hence it is, no doubt, that the same kinds of fruits which will prosper well in one place, fail to do so directly west or east in similar apparent situations. Indeed, the whole system of special manuring proceeds upon the supposition that certain principles, or qualities of soil, are essential to the success of fruits, varying according to the nature of the kinds."

"If you were to take your stand upon one of the elevated hills, of Muskingum county, for instance, you could at one glance, look down upon earths, that would have a greater influence on the apple, peach, or cherry, for good or for ill, than would the whole range of climate, from the shores of Lake Erie, to the foot of the Allegany mountains. The heart cherry upon these low, white-oak clay lands, winter-kills almost without exception. Upon the high, black-oak ridges, where there is a greater mixture of sand with the soil, they prosper and bear abundantly. The peach and the quince, on this clay land, are very prone to winter-kill and bear little; on the high grounds above, they do well." "The heart cherries seem to want a sandy soil, and if they can be accommodated with this, it is no difference whether they be situated high or low. The limestone clay, however, is not so fatal to them as the white-oak. On lands where you find the chestnut, black-oak, or poplar timber predominate among the forest trees, this cherry will be very likely to prosper."

Most varieties of the apple, it is stated, thrive finely on those lands so unfitted for the cherry; the following fact, however, shows the different nature of varieties of the same species, and the different soil they need:—

"The Roxbury Russet on the clay flats does no good—the tree is unhealthy, bears poorly, and the fruit is knotty and defective; on the elevated sandy ridges, the tree prospers and bears heavy crops of perfect fruit. The Newtown pippin is unsuited to the sandy ridge; the fruit is frequently small, scabby and cracked; but on the clay flats, where the Russet fails, it produces abundant crops of the finest fruits."

The same paper states that the Rambo, and the Westfield Seeknofarther, have been found to be well adapted to all soils in Ohio, and prove excellent fruits.

The writer, in his prejudice against the American Congress of Fruit Growers,—the most intelligent body of the kind, ever assembled in the United States,—has fallen into the mistake of asserting that its fruit committee all resided east of the Delaware river.

Dr. S. P. Hildreth of Marietta, in the same volume, says:—"Roxbury or Putnam Russet—our main apple for winter, and for sale on the Mississippi river—some of our river farms produced from 1000 to 1500 barrels, besides other varieties—it keeps till April." This is about as far south as Baltimore. Dr. Hildreth mentions the Tallman Sweeting, "as a valuable *large green* winter apple." The genuine Tallman Sweeting in the State of New-York, is quite light yellow, frequently while yet hanging on the tree. He thus speaks of the Rhode Island Greening, the unfitness of which for Ohio, has been so largely discussed:—"It is a fine apple for cooking or eating; the fruit of old trees ripens too early, but young ones do better; the '*bitter rot*,' so common to this and many other old kinds, in *old* orchards, is caused by the exhaustion of the potash and lime in the soil, and may be remedied by renovating the soil at the roots."

Heating Green-houses, &c.

This subject, which is attracting so much attention in England, is not less important in our variable climate.

Theoretically considered, there can be no doubt of the great superiority of "heated air" for this purpose, combining as it does, the essentials of warmth and ventilation.

Practically, every attempt to introduce this, seems, so far as we are informed, to have proved a failure in this country; although, abroad, the "Polmaise" method, by which a due proportion of moisture is secured appears to find favor.

To ensure success in this mode of warming, two things appear essential. The first is, that a current of air is established through the room to be warmed. Unless this is done, inequality of temperature, and stagnant vapor, will soon destroy the plants. The current can easily be secured by a large pipe, connecting the bottom of the air chamber, with an aperture in the floor at the opposite end of the room. The second requisite is, that the air shall be supplied with its due proportion of moisture. This may be done in part, by constructing a small air chamber, and by providing for the admission into the air chamber, and into the room to be warmed, a *very* large volume of air. The temperature will therefore be low, and its capacity for moisture be little increased. If a greater degree of dampness should be desired, it will be furnished by drippings from a tank, placed over the warm air pipe.

It is much to be hoped that some ingenious mechanic should construct a furnace, which, with the principle of the airtight stove, should combine cheapness, efficiency, and economy in fuel. The demand for such an article is unmistakeable. W. R. S.

Renovating Pear Trees.

What is the best remedy for a pear tree that formerly perfected its fruit beautifully, but which for three years has cracked—is gnarly, hard, small, and imperfect in every respect? Tree thrifty, and to all appearance healthy. Is the flowering locust likely to sour the ground, by its roots or shade, so as to injure the pear tree—standing within twenty feet? The variety came to us as the *Bachelor*—not described in books—fruit much like the Bartlett, in shape and flavor, but a little smaller. A. J. Keeney. *Erie, Mich., Feb.* 1849.

Frequent similar cases have occured, where the pear tree has grown thriftily, but the fruit has been worthless. It appears to be caused either by a natural deficiency or disproportion of some ingredient in the soil, or by the exhaustion of certain portions existing perhaps scantily at first. The fruit and the wood, differing in delicacy or susceptibility, as well as in composition, is the reason why the tree will often grow well, while the fruit fails.

Such trees have been renovated and made to yield good crops of fair fruit, by digging, at a few feet distance from the tree, a circular trench, say a foot and a half deep and three or four feet wide, and filling the space thus made, with rich *fresh* soil and turf, intermingled with a bushel or so of blacksmith's cinders, a few bushels of ashes, and two or three pecks of ground or crushed bones. This should be done in autumn or spring, the former being rather the best. An admixture of a bushel or two of charcoal with these ingredients, has been adopted in some successful instances, but it is probably of no essential advantage.

The Osage Orange as a Hedge Plant.

The past winter was one of unusual severity in western New-York. Many *hardy* roses lost half the growth of the previous summer. Plants of the Osage Orange of five or six years, were but little injured. Young plants suffered more. Upon a dry subsoil, and a somewhat elevated situation, there can hardly be a doubt of the superior efficiency and permanency of this hedge, wherever the climate will allow. W. R. S.

Mildew on Gooseberries.

In answer to frequent inquiries on this subject, we copy the following furnished by a correspondent to a late number of *The Horticulturist*:—

"Early in the spring of 1844, I purchased at auction a dozen bushes of the best English varieties of gooseberry, stated to have been imported by Kenrick. These were set out in good rich soil. I also transplanted to the same situation several larger bushes, of a small red variety, received from a friend a year or two before. In common with cultivators of this fruit in my neighborhood, I was year after year, doomed to disappointment in the fruit produced. Although, from the bushes of the smaller variety, last named, I annually raised a few very fair and fine flavored berries, the former yielding not an eatable fruit,—being, when about half grown, so covered with *mildew*, as is frequently the case in this climate, that a red variety could not be told from a white or green one.

Partly from the information obtained from *The Horticulturist* and other sources, and partly from my own reflection, I was led to try early and close pruning, and the application of a mixture of unleached wood ashes and salt, to the surface under the bushes. Thus; about the 1st of March, and before the buds have much swollen, cut off the larger half, and in some cases, two-thirds of the new growth, and when too thick, thin out some of the branches, so as to give them handsome open heads. When the frost is fairly out, and the ground cleared off about the bushes, apply to each one quart of unleached wood ashes, and one table spoonful of coarse salt, well mixed; spread evenly on the ground under each bush, over a space of one foot or more in diameter, according to the size of the bushes. About midsummer, add half the quantity for renewal.

I claim nothing original in my experiment, but know that it has succeeded admirably the two last seasons,—affording me an abundance of fine fruit, entirely free from mildew, on all the bushes, which are of seven different varieties. My method of cultivation may not succeed in all situations and seasons; but if lovers of the gooseberry will try it, before discarding and throwing away their bushes, as some of my neighbors have done, I think they will be fully remunerated for their pains."

Planting Fruit Trees.

"Will it answer to plant trees in grass ground?"

This question which has been answered for the thousandth time, is still propounded frequently; and with an interest which implies, that a great saving of labor may be effected, and full returns for the expenditure received, though the planting be indifferently performed, and the subsequent care neglected. If the ground has been deeply plowed, the "putting out" is soon accomplished, and if all is properly performed, the growth and value will be increased ten fold. A neighbor set out some apple trees in turf; soil deep and rich. At a few rods distant, he planted others, which were kept under cultivation. In his own language, "The last were as big as his leg, the first but little larger than when taken from the nursery." An extensive fruit dealer once called my attention to the difference between that part of his peach orchard which had been plowed, and that in which it had been omitted for the present year only. The deep green leaves and vigorous growth of the cultivated part, contrasted strongly with the other, altho' to the casual observer, both would appear in good condition. W. R. S.

Hyacinths, &c.

The following is an extract from a late letter of a distinguished florist of this State, in relation to this beautiful bulbous flowering plant:—

"There is a great difference among Hyacinths. The size of the raceme is a most important part. If the flowers are few, and scattered along the scape, the plant is generally of small value; but numerous and crowded flowers make the best appearance. I have some of extraordinary beauty. The bulb importers say that Hyacinths soon degenerate in this country; and it may be so where they are neglected; *but a few years ago, I bought a number at Philadelphia and New-York, that are quite as fine as when I first got them*; *and I have had several for many years that show no signs of degeneracy*. Dr. T—— called the other day, and admired them very much. He lost most of his splendid kinds last summer by the rotting of the bulbs. They ought to have been taken up. Some kinds of bulbs, as the Crown Imperial, and some species of Narcissus, are very liable to rot in summer, unless the soil is trodden down over them to keep out the wet." These remarks were applied to heavy soils, and are doubtless applicable to all on which the water does not immediately drain off.

"The seeds of *Cyclamen hederæfolium* have germinated, and the young plants along side the old ones ap pear very much *at home*. It is curious that such interesting ornaments of the border, should have been so totally neglected in this country."

Budding Peach Trees.

EDS. CULTIVATOR—In reference to the destruction of the inoculated Peach buds, by the cold weather during winter, complained of by C. J. S., I will give the result of my observations and experience. I have devoted considerable time and attention to the propagation of choice varieties of fruit for some years past, and have endeavored to trace causes to effects as far as my limited knowledge would permit. I have budded annually for seven or eight years past, many of all the different varieties of fruit from the apple to the orange. I have sustained some losses from the cultivation of the peach, as complained of by your correspondent. I have found if they are not budded till September, they are liable to perish in winter; as the adhesion of the bud and tender wood of the stock where the bud is inserted, is not sufficiently matured to withstand the severity of the weather. I commence budding the peach as soon as the buds are sufficiently formed and matured, so that the leaf buds can be discerned from the fruit buds, which is in the fore part of the month of August. I think if C. S. will adhere to the above rule, he will not have to resort to the *labor-losing* experiment of grafting the peach. R. H. DRAKE. *Bloomingsburgh, Sullivan Co., N. Y., April*, 1849.

Rose Bugs.

This insect, so troublesome in many parts of the country, can only be avoided by direct destruction. An excellent practice is to shake the trees at night over sheets of muslin spread beneath, which enables the operator to kill them with facility. Killing by hand-picking has been successfully practiced, but requires time.

Hybrid Perpetual Roses.

One of the most valuable characteristics of this class of roses, is its blooming out of the usual rose season, when the brilliant profusion of flowers on the Hybrid China and other early summer kinds has disappeared. Now, to have the Perpetuals to perfection in late summer and autumn, pinch out, as soon as visible, every blossom-bud that appears at the first crop, or during the first few weeks of their appearance. This reserves the strength of the plant for a later period, and as a consequence, thick and rich clusters are obtained, not to be had in any other way.

Lima Beans.

EDS. CULTIVATOR—Those who are fond of this vegetable luxury, may be sure of raising them without risk of failure by adopting the following plan. Procure a board two feet square, and nail strips around the edge, three inches wide about the middle of May, cut some sods from the roadside where the grass is short, divide them into squares of four inches each, soften or mellow the soil in each square, without destroying the texture of the sward, place four beans on each, and cover with another sod of the same size; moisten sufficiently, and place the board in the warmest situation that can be found, either beneath the surface of a heap of manure that is heating, or in the top of a room where a warm fire is kept during the day. Keep them in this warm situation until the beans themselves begin to rise; then remove the upper sods, and cover with leaf mould one inch deep. As soon as the beans show themselves through this, they should be removed to the hills where they are to grow, which is done by carefully lifting the sods from the board, and placing them in the ground. I prepare the hills by spading in, and mixing thoroughly with the soil, about half a wheelbarrow load of well-rotted manure; if it is two years old the better. I also add a few quarts of leached ashes to each hill with the manure. At the time the beans are placed in the hills, the poles should also be set for the support of the vines—two strong ones to each hill. By adopting this plan, the beans will be fit for the table at least two weeks earlier than they usually are when raised in the ordinary way. It will be seen that each board will hold twenty-four hills, and twice that number will be enough for the use of any ordinary family. ISAAC HILDRETH. *Big Stream Point, April*, 1849.

Fruit-Buds killed by Frost.

EDS. CULTIVATOR—Why are not fruit buds killed on the montain, as well as on the flat ?

In answer to the above query of your correspondent, R. H. Drake, in your April number, I conceive you have not given the true cause.

My opinion is, that fruit buds are not killed by cold weather, unless there has previously been warm weather sufficient to cause them to swell, which would much sooner occur in the valley or on the plain, than on the mountain, where the colder air will keep them back; and after the buds have commenced growing or expanding, a degree of cold less severe, than that experienced either on mountain or plain, will destroy them.

The same fatal results have occurred much farther south than the location named, and where the cold has not been as intense as on the mountains there.

The warm weather during the month of December last caused the fruit buds, in warm situations, to germinate, hence their destruction by the succeeding cold. P. S. *Burlington Co., N. J., April*, 1849.

Spanish Radishes as Food for Cows.

EDS. CULTIVATOR—Mr. AARON BELANGEE, a respectable farmer of Bordentown, N. J., whose farm is in a high state of cultivation, raised on one-fourth of an acre of land, one hundred and nine bushels of the white Spanish Radish. He states that they were sown in drills, in the same manner and at the same time that Ruta Bagas are—that some of them grew five inches in diameter. He prefers the white variety to the black on account of their growing to a larger size. He says that the person from whom he obtained the seed, informed him, that after feeding his cows for some time with Sugar Beets, he commenced giving them the Radishes, and in about a week his wife inquired what he had fed the cows with, as their milk had, for about a week, produced one-third more cream than it had before.

Mr. B. experienced a like result in feeding with Radishes. B. *Burlington Co., N. J April*, 1849.

LARGE PRODUCE OF HONEY.—Mr. JAMES CULVER, of Royalton, N. Y., informs us that his father had two swarms of bees come out on the 15th of June, 1848, both of which were put into one of Colton's hives; and they made during the season, one hundred pounds of "box honey," besides filling the body of the hive with honey and comb. The hive was one of sixty which were kept together.

DRILLING WHEAT.—The *Michigan Farmer* states that Col. Curtenius, of Grand Prairie, has satisfied himself from experiments which have been made in his neighborhood, that wheat sown with a drill, will yield on the average, five bushels more to the acre than that sown broadcast. It is more secure against being winter-killed, and the seed is more sure to vegetate.

Domestic Economy, Recipes, &c.

Manufacture of Cheese.

(*Continued from page* 154.)

In raising heat to scald the curd, it is not proper at all times to raise it to a given point with the same rapidity, because, sometimes when the curd appears ready to scald, a rapid increase of heat will soften instead of hardening it, owing to the rennet not having time to perform its office properly. At other times it may be necessary to raise heat speedily, in scalding, to keep pace with the effect of rennet, which is accelerated by the milk being nearly sour. The slower rennet acts upon curd the longer time is required to raise and hold a scalding heat, never exceeding one hundred degrees, Fahrenheit, except to suppress a speedy action of rennet with sour milk; then, an excess above blood heat will retard its operation and keep pace with its effect. The cheese-maker should bear in mind, that heat and rennet are the principal agents used, and success depends much upon their action being properly combined throughout.

"Are any other than calves' rennets used, and what is the best method of preserving and preparing them for use?"

Swines' rennets were formerly used, mixed with those of calves, to make a cheese soft and tender, and those of sheep and beeves were used to harden curd and keep cheese in a pressed shape; but I know of no dairyman that now uses them.

Whatever plan is adopted to preserve rennets for future use, care should be taken that the decomposing properties of the stomach do not continue to act, and the strength evaporate. When salted and dried the rennets should be kept in a dry atmosphere, or the salt in them will attract moisture, and soon destroy their best properties. It is argued by many experienced dairymen, that the stomach, with all its contents pickled together in salt, will make more cheese, and of as good flavor, as when dried without the curd. But I would ask, if meat were salted with all the blood and animal fluids in it, would it be as good flavored at the end of a year, as if well dressed and salted? And would not a quantity of food, half digested, salted with the stomach, materially effect its flavor, if kept a long time? Beef and pork are sold in market, after being in salt one or more years, at a reduced price, as "old meat," having lost its best flavor.

The flavor of cheese depends much upon the flavor of the rennet used. Therefore, I think splitting the rennet, and stretching it with sticks, so that it will be of a single thickness, and will dry quickly, is the best and surest way to preserve a good flavor.

To prepare Rennets for use.—Take as many gallons of water as rennets in number; put them in the water, blood warm; soak them twenty-four hours; stir them frequently in the time; strain the liquor and let it settle; make it as salt as possible; if any skum rises it should be skimmed off. While this liquor lasts a uniform strength may be relied upon. It should be stirred to the bottom before being used.

"Is milk more apt to sour from the effect of electricity, in tin vessels, than in wood?"

The ease with which tin vessels are kept clean, makes them preferable to wood. An opinion conceived by many, that tin vessels have a tendency to sour milk, at a season when thunder showers are frequent, is not an objection to their general use. There are other causes for milk's becoming sour, to be taken into account first. Excitement of cows from any cause will affect their milk, and they are more excitable in changeable weather, than when the weather is steady, cool or warm. In hot, damp weather, more cows will be in heat, and give bad milk, which if mixed with other milk at evening, will be a more direct cause for sour curd than any effect of electricity upon milk, after it is taken from the cow; and in such weather, milk vessels are not thoroughly dried, after being used, in which state they often get foul. An old barrel, put up in form of a leach, near the dairy room, and ashes thrown into it occasionally, and leached, and the lye used freely about cheese-cloths, press, &c., will remove one cause for sour curd. I use no wood vessels in my dairy.

"Is there danger of pressing a cheese too hard?"

Not any. If it has been over heated in the milk or curd, it may be pressed so dry that it will be a *lifeless* (tasteless) cheese, and so it would be if it were pressed lightly.

"Should the animal heat be allowed to pass off from the morning's milk?"

The most perfect affinity should be maintained among the constituent parts of milk that is curded or worked together, throughout, that it may not waste in working, and plague in curing. It is, therefore, necessary that all should be cooled and warmed alike. A. L. Fish *Litchfield, Herkimer Co., N. Y. May*, 1849.

Cheap and Valuable Paint.

Eds. Cultivator—The Ohio mineral paint has been offered to the public as something very valuable, particularly to the farmer, for its durability and cheapness. I send you below, the detail of some experiments which I caused to be made a year or more since, for cheap paint. I believe it equal to the Ohio article in all particulars, and superior from its *greater cheapness*, it being within the reach of almost every one.

Experiment No. 1, was the mixing of *water-cement* with oil to the consistency of paint, and putting it on immediately. Any drying article used with oil paint, may be put in, if it be desirable to have it dry at once.

No. 2. *Cement* mixed with *coal tar*, or gas-tar, as it is sometimes called, I put in, in the same manner, without any drying mixture. You can vary the color by the addition of any mineral substance. The paint I have put on, is now as hard as stone, and was put upon rough boards that had been exposed to the weather for ten years. I have just had painted a small building of rough boards, battened sides and roof. The roof is covered with No. 2—the sides with No. 1. The color of both is stone. No. 1, nearly that of free stone, with a shade of handsome drab, and gradually becomes a little lighter. No. 2 is considerably darker, but this too becomes lighter by exposure to the air. I intend giving to the body of the building another coat, when sharp clean sand will be thrown against it, and I doubt not, but I shall obtain a rich imitation of free stone.

The water cement used was from Southington, Connecticut, known as "Moore's Cement."

It is not, like the Ohio paint, patented. Charles R. Alsop. *Middletown, Conn., April* 27, 1849.

Proper Selection of Stock.—At a late agricultural discussion in Derbyshire, Mr. G. Greaves remarked that the choice of a breed of stock was as important as the management. It seemed to him that enough attention was seldom paid to the particular kind of produce it was intended to obtain from stock. The same breed did not answer for feeding and for the dairy too; for the early maturity of stock and the propensity to fatten, were most observable when the generative functions were not so perfect, whereas the good milker was almost always a good breeder. For early feeding stock, it would always be advantageous to mix good nursing dams with sires that had a great tendency to fatten. He agreed in the opinion that feeding stock should be kept well when young; but calves intended for the dairy, and ewe lambs for the breeding flock, should not be made fat.

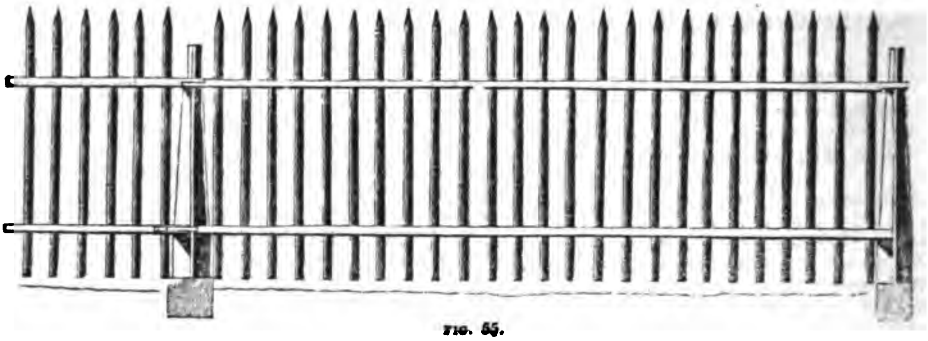


FIG. 55.

Coons' Patent Fence.

The figures herewith given, represent different forms of a fence invented and patented by Mr. M. P. COONS, of Lansingburgh, N. Y. This fence has been erected to more or less extent on several farms, and so far as we learn, has been decidedly approved. It is recommended as possessing the following advantages: 1st. Lightness of construction. 2d. Permanency and strength. 3d. Durability. 4th. Ease of construction and conveyance from place to place. 5th. Adaptation of being permanently placed on all kinds of soil without being injured by frost or wind, and its use as a temporary hurdle fence. 6th. The remarkably low price at which it can be afforded, and its neat and ornamental appearance.

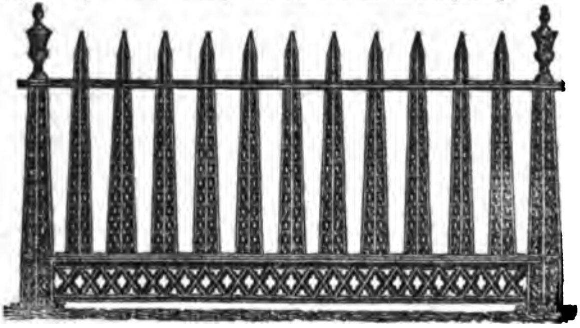


FIG. 56.

Fig. 55 represents a pannel of all wood fence,—that is, iron posts, wood bars and pickets, without base, with gate attached. This plan or grade of fence varies much in price; if made of first quality of materials, in six feet pannels, with base and iron ornaments, and the timber be of the first quality of pine, cedar, oak or chestnut, four feet high, at thirty-seven and a-half cents per foot; if made of spruce, hemlock, whitewood, &c., twenty-five cents per foot, all delivered in a finished manner, with ornaments, &c., complete.

This same pannel also may represent a stretch of twelve feet of common field fence; if made of good pine, oak, cedar or chestnut, without base, it is afforded at three dollars per rod; if made of spruce, hemlock, &c., from one dollar fifty cents to two dollars per rod. If base board and ornaments are required, they are furnished at cost prices.

All the wood bars are bored with a tapering augur or bit, from the lower side of the bar, thus forming a tapering or tunnel formed hole, the smallest part being at the upper side of the bar, the pickets may be more snugly drove without checking the timber, and consequently make a tighter joint, and the air is permitted to circulate freely around the timber underneath, thus preventing rapid decay of the picket and bar at the joint.

Fig. 56 represents a pannel of fence, all of cast iron, and is afforded at from one dollar to one dollar twenty-five cents per foot, according to weight of iron.

Fig. 57 represents a patent hurdle or portable fence, which may be taken up and removed from place to place, with as much ease and facility as the bottom rails and blocks of a common rail fence may be placed and replaced. This invention consists in the construction of cast iron posts with holes cast in them at proper distances for attaching iron wire or iron rods, of any required size; if made expressly for hurdle fence, iron rods of three-sixteenths of an inch in diameter are considered the best. This kind may be made what is what is called tight fence, which will turn the smallest domestic animal; or may be so constructed as to guard only the larger animals, and the difference in the expense depends entirely upon the number and size of the iron wire or rods used, and the length of stretch from post to post, and height of fence. For example, a tight fence with three-sixteenth inch iron rods, twelve feet stretch, four feet high, at three dollars per rod. If of number ten wire, and sixteen and a-half feet stretch, it would not cost more than about one-half that sum. This last described style of fence may be better prepared and put up at its location. The posts for this fence will be furnished at four and a-half cents per pound; and full directions and the right of use will accompany the bill.

All the varieties of fence may be put down permanently or temporarily; if it is permanently placed, it still may be taken up and removed without any injury to the fence, at a small expense. The posts are constructed in such a form that they may be placed in a block of wood or stone, or an iron cope or foot.

If in stone, a hole is drilled in a stone of any form, of proper size, (as the shape is not material) two inches in diameter, five inches deep; the stone is settled down, within two or three inches of being even with the surface of the ground, and the post inserted and secured with iron keys, lead or brick dust.

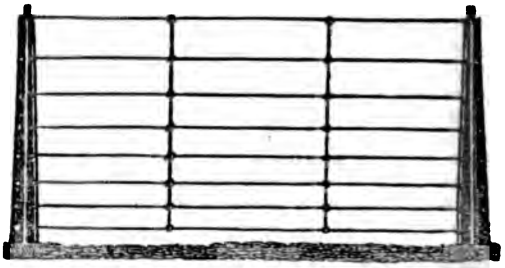


FIG. 57.

If blocks of wood are preferred, a hole is bored in the centre of a block of wood, of proper size, 2½ or 3 ft. long, or still longer, according to the height of fence, and laid in the ground transversely with the line of fence, and the posts are inserted by driving. If of iron, a wrought iron pin with a screw is used to secure the cope to the base.

For further particulars, inquire of **Matthias P. Coons**, Lansingburgh, N. Y.

The Farmer's Note-Book.

Farming in Western New-York.

Eds. Cultivator—On reading in the Feb. and March numbers of *The Cultivator*, F. Holbrook's description of Judge Hayes' farming on a hard, hungry, New England soil, we have a fine example of what industry, economy, and practical science will do towards making the "desert blossom as the rose." But it would be not less an interesting spectacle if we could once look upon a farm in this all alluvial* county, on which a tithe of the same labor and manure, had been thus judiciously expended and applied. 'Tis true, we have many good farmers in western New-York, men well read in the theory, and practiced in the details of their great calling, if we compare them with the mass of farmers in the same favored section of the earth's surface. But how will they compare with such masterly men as Adam Anthony, of Rhode Island, or W. A. Hayes of Maine, in the art of overcoming great natural obstacles, and the quickening of primitive sterility. As well perhaps, as the general who takes his troops to the battle field on steamboats or railroad will compare with the Carthagenian of old, who had first to soften and reduce the rocks before his army could scale the Alps, to look down upon the battle field.

It will be urged that necessity is alike the goad to genius and industry, and the mother of invention; but that our soil requires no such labor and expense as the barren detritus of New England, that the extra amount of crop would not pay for the outlay, &c., &c. To meet this stereotyped argument, I only ask for a tithe of the labor, and no other *amendment* to the soil, than a judicious making, saving and application of the manures which are inherent to, and may be made on the farm. I now appeal to those truly intelligent farmers of this (Seneca) county, who read *The Cultivator*, if a tenth part of the labor and expense bestowed by Judge Hayes in carting clay on his sandy lots, with the other amendments and extra tillage bestowed by him, would not enable them to grow twice as many bushels of grain to the acre as they now grow? or at least half as many imperial bushels to the acre, as is grown in England, on the best farms, under the best cultivation. But if the best Seneca county farmers are still behind some of those in Old and New England, they are second to none in New-York. The premiums awarded to farms in our county by the State Ag. Society, two years successively, as the best farms in the Empire State, are intrinsic evidence of the fact.

Much good is to be anticipated from the improved and improving practice and example of such men; while they adopt the mode of wheat culture, the very tidy farming of their immediate neighbors of German blood, they ingraft upon it those late discoveries in the composition of manure and the art of manuring, which properly belongs to agricultural science. Such is the force of the example of such individuals on the rural economy of this county, that even those farmers among us who have heretofore scandalized *book farming* as empiricism, begin now to yield to the occular proofs of what the book has done, and is now doing. In fact, many of our farmers begin of late to be impressed with the dignity of their calling; and to embrace the belief that the *book* is as necessary to the farmer, as to the mathematician, the architect, the lawyer or the priest. But there is still in every community of farmers, that egotistic impracticable class, which blindly abuses heaven's best treasure. Such men will never take the hint that the fat of their soil is not as indefeasible as their title to its measured acres, until they learn it in the diminution and failure of crop. Such men not only waste their manure, but their general practice of tillage is alike superficial, behind hand, reckless. When they are told in order to induce them to save their field and house ashes, that no plant can grow without the elements of its ashes, and that the ashes of all plants are nearly the same, their reply is, "I dont believe in your *book farming*." I sometimes think that the art, and I may now say the science of tillage, has no charms for such men, beyond the present food and dollars they force from the soil. The earth's products, instead of exciting the mind of such individuals to the interesting study of nature's laws, the *modus operandi* by which she produces and multiplies, in her vegetable and animal kingdoms, and then dissolves and reproduces from the scattered elements. It would seem that their marvelousness is the only faculty of the mind interested in the matter. As the Athenian raised an altar to the Unknown God, so do such self-blinded men, deify and erect an altar to the moon, as the patron saint of their trade and calling.

The farmers of western New-York have yet but a superficial knowledge of the inexhaustible treasures they possess in the rich diluvial formation of their soil; 'tis said that layers of hard pan are in some places deposited near the surface, but the subsoil generally contains organic remains, with all the salts necessary to produce the maximum yield of cereal grains, to a great depth. On the plateau of Varick and Romulus, the table land between the Cayuga and Seneca lakes, the soil is a heavy loam; when the forest was first cut off, great crops of wheat and other cereals were produced, but now the surface soil is worn down heavy and dead; water sometimes stands on a hundred fields until the summer months, so that the average yield of the cereal grains, according to the late statistics of our Ag. Society, is much lower there, than in the other towns of Seneca county. Draining is the panacea for such lands; their organic treasures are inexhaustible. One farmer in Romulus, whose farm is almost a perfect level, told me that the only perfect wheat he had grown for many years, was on the subsoil thrown out of the main ditch, which he had cut the same season the wheat was sown, to relieve the field from surplus water. S. W. *Waterloo, Seneca Co., March* 12, 1849.

Shall we make Composts?

In *The Cultivator* for January, 1819, I read a notice of a work entitled "*Scientific Agriculture*," *&c.*, by Dr. M. M. Rodgers. I have since procured the book, and in glancing over its pages, I came to the following, under the head of "*Composts:*"

"It was formerly supposed, that great advantage was derived from the combination of several different substances together, and forming what are called *composts*. The recipes for these compounds are numerous, and go to prove that the discovery of a good compost requires but little scientific or practical skill. When a compost heap is made up of several materials, which are all separately good manures, it follows of necessity, that the resulting compound must be a good fertilizer. But it is impossible to supply any more in this way, than if these several ingredients were applied to the soil separately. And a little knowledge of chemistry will show that by this means no new elements can be generated. Neither can any new property be developed which could not be done by their separate action. We see that whenever a substance which has little or no fertilizing power, is in this way manufactured into good manure, it is done at the expense of some powerful fertilizer which is distributed by the mixture, and consequently, loses just as much of its efficacy as the other gains. Thus, although this process serves to dilute and extend manures which are too powerful or too expensive, it absolutely supplies none."

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* I say alluvial, because diluvion is often without the elements of rich alluvion.

The author goes on still further to explain, that the principal advantages of composts, are the dilution of manures which are too strong when used by themselves. Thus, among other substances, he mentions "caustic lime," the object in using which, he thinks can be much better attained by mixing and diffusing it through some other substance, "such as saw-dust, sand, *barn-manure*," &c.

Now the inference from the above remarks is, that ordinary composts are unprofitable—that no effect is produced that would not take place if the substances were applied separately, and that, consequently, the labor of forming the compound is lost.

It strikes me that Dr. R.'s reasoning is not entirely sound, and that his conclusions are not wholly reconcilable with facts. It is not strictly true that the same effect is always produced by the use of substances applied separately, that would follow from their combination. For instance, peat, in its natural state, frequently contains an acid which is prejudicial to vegetation, and its fertilizing properties are locked up, as it were, until they are liberated by the action of some substance which causes a decomposition. Hence it has been found highly useful to mix with peat, alkalies of some kind, by which the acid is destroyed, and the peat brought into a soluble condition. Potash and ashes are used for this purpose; the ammonia of animal manure, urine, and all animal matters, produce a similar effect. Thus, Doctor Dana, in his *Muck Manual*, states that—"the power of alkaline action is alone wanting, to make peat good cow dung," and that—"by the addition of alkali to peat, it is put into the same state which ammonia gives to dung."

Here, then, is one example of the advantage of combining or mixing substances to be used as manure. But it may be asked—"Why will not the same effect be produced, if the peat and the alkalies are both spread, separately, on the same land?" For the obvious reason that they are not brought sufficiently, and for a proper length of time, into contact. The alkalies being spread over a larger surface, and exposed to the air and rains, are soon dissolved and carried into the soil below the peat.

But there are other advantages in mixing different substances in a manure-heap. The farmer should endeavor to save all the excrements, of his animals, both solid and fluid, as well as all other substances which are capable of enriching his land. The readiest way of saving urine, is to retain it by means of some absorbent—such as charcoal-dust, peat, loam, straw or other vegetable rubbish.

Again, if it were true that substances ultimately produced the same effect when applied to the soil by themselves, as when combined, there is still, in many cases, a *convenience* in composting. It is inconvenient to use corn-stalks, and other litter in their crude state. If applied to the surface, they do not readily rot, and they interfere with cultivation by obstructing the operation of the implements used. If buried beneath the surface, —which is not always readily effected,—they sometimes cause the soil to be dry and *huffy*. There is no way that these matters can be used to so good advantage as by mixing them with animal manure, and saturating them with urine. By this means, the ammonia soon brings on a decomposition, by which the fibrous tructure is cut down and they are brought into a comminuted state, fit to be used as circumstances require. But we may cite other authority in favor of composts. J. Prideaux, an agricultural chemist of considerable distinction, advises to mix in the manure heap—"peat, sods, turf-parings, ditch and pond scourings, way soil, humus soil in whatever form, and ashes of all kinds. All *liquids* in which vegetable or animal matters have been soaked or boiled; and all that contain fertilizing materials, as soap suds, dish-washings, pot-liquor, &c. "We must remember," he adds, "that vegetable matters work sour, and that animal substances generate ammonia, which neutralizes the acid, and is fixed by it, so that in due proportion they correct each other. Urine gives most ammonia."

One word, before closing, in regard to mixing "caustic lime" with "barn manure," recommended by Dr. Rodgers, as one of the means of "diluting" the lime. This is a kind of compost that I am not in favor of. I had supposed, if any thing has been established by chemical investigation, that caustic lime should not be mixed with animal manures. Thus Prof. Johnston says, guano should not be mixed with quick-lime—"because the quick lime sets free the ammonia contained in the guano, and causes it to escape into the air." He observes, also, that "quick lime will, in the same way, drive off the ammonia contained in liquid manure, and in horse or farm-yard dung." Farmers who have bought poudrette that has been compounded with fresh lime, have often complained of its inefficacy.

T. Sedgwick, a writer in the English *Agricultural Gazette*, says—"The employment of lime with dung is a most baneful practice, as it renders the ammonia caustic and volatile, to the greatest degree, and causes the loss of the most energetic portion of the dung When lands require lime, it should be applied separately, and avoid as much as possible, its contact with the dung."

The effect of mixing lime with animal manure, may be explained as follows:—Lime-stone contains nearly half its weight of carbonic acid. In the process of burning, the carbonic acid is driven off; but the lime has a constant tendency to return to its original condition by the re-absorption of the property it had lost. Animal manure contains ammonia, combined with carbonic acid. When fresh lime is added, it attracts the carbonic acid, which, uniting with the lime, sets the ammonia free, and it escapes. A. B.

Cost of producing Wool.

EDS. CULTIVATOR—I commenced with the first number of *The Cultivator*, in 1834, and have been its constant reader ever since, and think I have been amply compensated for the time and expense devoted to it. I have been a farmer for over twenty years, and I yet feel a much greater need of being instructed myself, than of an ability to be an instructor of others in the great and important business of agriculture, to which I have devoted so many, and purpose to devote all the remaining years of my life. Yet I shall venture to give an opinion upon the subject of the value of the wool-growing business in this country, and in doing so, shall venture to differ from Mr. Randall and others, who may perhaps have had more experience in the business than myself.

Mr. Randall estimates the nett profit of wool-growing at 27 per cent. Others have placed it as high as one hundred and upwards. Mr. Pettibone, in some very sensible remarks published in your April No., puts the profits at six per cent., and yet, if I can understand his figures, he estimates that he had succeeded in clearing a much greater profit than that stated by Mr. Randall.

In the face of all these authorities, I shall venture to say, that for some years past, wool-growing has been a losing business to the farmers. We have in this country, the facilities for supplying the world with wool, and yet we do not supply a quantity sufficient for our own consumption. Mr. Lawrence estimates the deficiency of ten millions of pounds annually.

It would be an impeachment of the intelligence and enterprise of our farmers, if they failed to supply the country with wool, when the business of growing it afforded any considerable and reliable profit.

The census of Massachusetts, taken in 1845, will probably give as much true light upon this subject, as can be obtained from any other authority. Her farmers are doubtless as intelligent as can be found elsewhere. They are situated in the midst of manufacturing establishments. The period was one when these manufacturers were enjoying the highest rate of protective duties. If, under these circumstances, they did not make the business of wool-growing profitable, it must be conceded that it cannot be so throughout the country.

Their sheep numbered 355,043, of which near two-thirds were Saxons and Merinos. The wool produced was 1,016,230 pounds, or about 2¾ pounds per head. The average price was 32 cents per pound.

It is universally conceded that it requires as much feed during the year to keep ten sheep, as it does to keep one cow. I have never known a cow to be kept during summer at less than twenty-five cents per week, nor during winter for less than forty. Upon this estimate then, the cost of keeping one hundred sheep during thirty weeks of summer, would be $75, and during twenty-two weeks of winter would be $88. If to these sums should be added five dollars for shearing and washing, it would make the annual cost of keeping one hundred sheep, $168. The value of the wool grown on one hundred sheep, according to the census for Massachusetts, was $88. To this add eighty per cent. for lambs, which would make the income just equal to the expenditure, without one cent for profit. It will be borne in mind that this result was produced under the most favorable circumstances, and while nothing is deducted for losses on the flock, the income for lambs is certainly rated much above what is generally realized.

As to the calculations of Mr. Pettibone—it is in the expense of summer keeping, that his estimates differ materially from mine. He estimates the weekly pasturage of sheep at seven mills per head, whereas I put it at two and a-half cents. Should he in that respect, make his figures to correspond with mine, it would have shown his profits to have been a little over six per ct., corresponding with his general estimate. To realise that result, required all his superior sagacity and experience, favored by extraordinary circumstances. His price for hay, six dollars per ton, is less than farmers generally can afford to raise that article. And eighty per cent. increase of lambs is not realised by a tithe of the wool-growers of the country.

It is important that there should be a right understanding of this subject. A want of such understanding, has already created feelings between the wool-producers and the wool-consumers, prejudicial to both. The manufacturers, deceived by such representations as those of Mr. Randall and others, have honestly believed that the wool-growers were in the enjoyment of enormous profits, and that if, with such enjoyments, they could not grow wool sufficient for the requirements of the country, no considerations of price could induce them to do so. They, in consequence, have not only neglected to offer such inducements, but may have actually felt themselves justified in resorting to ingenious devices, in order to reduce the price of wool. Thereby promoting their immediate interests, and creating to themselves ultimate injury. By discouraging the growth of wool at home, they have been driven to a foreign market for supplies.

On the other hand, the wool-growers, knowing that the profits of their business would scarcely justify its continuance, believe that the manufacturers do not exercise the liberality that their business would warrant them in doing. Animosities are thereby created, when it would be to the interests of both to entertain feelings of reciprocal kindness.

Were the manufacturers undeceived upon this subject, they would doubtless at all times be willing to pay as high prices for wool as their business would justify. Should the wool-growers receive as high prices for their wool as the manufacturers would pay, under a right understanding of this subject, I have no doubt they would produce wool to meet the required consumption of the country. POLYDAMAS. *Hillsdale, N Y., May* 1849.

Analyses of Limestone.

EDS. CULTIVATOR—Ever since I read the analyses of corals, by Prof. B. Silliman, Jr., published in the *Am. Journal of Science and Arts*, a year or two ago, I have been fully convinced that our limestones, and more especially those presenting a great quantity of organic remains, would be found to contain all the essential inorganic constituents of plants. The sedimentary limestones are made up, in part at least, and I have little doubt, wholly of the remains of shell-fish and coralline structures, that inhabited the oceans of a former period; and since corals do contain all the ingredients that exist in the ash of vegetables, as the investigations alluded to demonstrate, therefore, analogically, we infer their presence in limestones. I had hoped long ago, to put my ideas to the test of experiment,—to submit several varieties of limestone to rigid analyses, but, suffering the penalty of being poor, this I have not accomplished. You may judge of my delight, then, to find these opinions fully sustained by the admirable article of Prof. PETER, in your April number.

The Trenton Limestone is a prominent rock in Lewis county, and from the vast quantity of fossil remains evident in it, it is doubtless as rich in the phosphoric and sulphuric acids, together with magnesia and the alkalies, as its equivalent, analysed by Professor P. The "Black River," "Birdseye," or "Gray" Limestone, of the State Geologists, also occurs here, immediately underlying a strip of land contiguous to the western side of Black River, running through the whole length of the county, being several miles in width. It is a harder and more compact rock than the "Blue limestone," and consequently, preferable for building purposes. Well characterised fossils are rare in this rock, and hence we might conclude the absence of their valuable constituents. But probably they do exist, and if analyses shows their presence, and gives quantitative results similar to those observed with regard to the more fossiliferous rocks, we shall have a good geological argument proving that difference in the appearances presented by the two members, arises from dissimilarity of condition, not of composition, and the causes of these differences may perhaps be considered their unequal exposures to heat and pressure, during solidification, and to unlikeness in the intensity of the convulsions to which the structures composing them have been subjected.

The strictures of the Professor upon the incomplete analyses that hitherto have been published are perfectly just, and greatly needed at the present time, when the desire of accomplishing much, tempts to superficial investigations, and premature conclusions; and when from the rapid advances chemistry has lately made, there is danger of considering our processes perfect;—while the reputation of some prominent individuals is such as in a measure to control the researches of others, rendering them liable to follow famous precedents, rather than reason and labor without prejudice.

Perhaps it would be well if these strictures were extended to a criticism, especially when even the labor of justly celebrated chemists in official capacity, has been wasted in some instances. There is nothing satisfactory to the scientific agriculturist in reading an analysis of a limestone stated as follows:

Carbonic Acid,	48 82
Lime,	31 12
Magnesia,	16 06
Insoluble Matter,	4 00
	100 00

Such exhibitions of professional folly may do for 50 years ago, but in the middle of the nineteenth century, we recognise no such substance as "insoluble matter" in our nomenclature. In this same insoluble matter may be hid the very pabulum of vegetable life.

There is a great deal of prejudice yet to be overcome before a rational and scientific agriculture is understood and practiced. From my own observation, I am convinced that the *scientific* light diffused by your valuable Journal, makes very little impression on the mental retina of hundreds of farmers who support it. The greatest extent of the good accomplished in many instances, is expressed in saying, that the mechanical appliances of farming are improved. It becomes, therefore, the interest as well as duty of him who would bring science to the aid of agriculture, to make every labor as complete as possible, and especially to avoid the dogmatic introduction or support of untested theories, and that narrow minded ignorance which entertains the possibility of making any *one* discovery, that shall remedy the failings of the present practice. Scarcely less despicable is that species of charlatanism which prompts the advertisement of agricultural nostrums. They are always to be suspected of those who entertain, as did Lord Bacon, the sentiment that "Knowledge, like the light of Heaven, is pure, *free*, exhaustless."

Much is to be hoped from the labors of scientific men, conducive to the interests of agriculture. The farmer has to deal with nature; to follow intelligently his business supposes a knowledge of her laws. Those laws are the professed object of the chemists inquiry, and hence follows,—what experience has a thousand times established,—the ability of the chemist, to fashion his practice, so as best to assist, and imitate nature and consequently, to gain from her the greatest amount of benefit.

Farmers' sons must be instructed in Natural Science The mind is the great instrument, and this mind must be cultivated. All are familiar with the difference between the crab apple and the beautiful grateful fruit that yearly adorns our orchards; no less difference is there between the mind native and cultivated. There is no better means of a speedy and harmonious development of means intellectual, physical and moral powers, than the study of nature. Do our great chemists, geologists, &c., fall behind mathematicians, and classical scholars in mental acumen or profundity? They certainly occupy a greater rank in view of the utility of their labors. The natural sciences offer this decided advantage ever every other study to the young farmer, that they are of direct application to the daily concerns of his life.

Let him then be more concerned to know the nomenclature of chemistry, than the Greek alphabet. Let him study Liebig before Virgil, and Boussingault before Horace. Not that I would cast any reproach on the study of the classics, but I would have education adapted to the wants of the educated. Every farmer should be thoroughly acquainted with chemistry, botany, zoology, &c., as affecting the principles of his art. Not that every farmer should be a chemist,—that would be impossible;—but many possessed of natural tact, might render themselves sufficiently expert in analysis to materially benefit their business, without interfering with it. The schools of practical chemistry that are springing up in our midst should be well supported by our farming community.

The reason why so few young men of talent and intellectual promise are found engaged in cultivating the soil, is that agricultural pursuits, as commonly practiced and understood, offer no gratification to the *mind*. The proper application of science to husbandry, will remove this evil; and so soon as provisions are made for the education of farmers, equal to those now furnished for physicians and lawyers, we shall behold the intellectual, as well as the physical energies of our country, devoted to the perfection of agricultural processes.

But I did not intend a lecture on book-farming, education, &c., and begging pardon for this desultory digression, I will conclude by recommending to the inhabitants of Lewis and every other county, that are supplied with calcareous rocks, a liberal use of lime upon their fields, and let some of them perform a series of accurate experiments upon its fertilizing powers, after the many good examples that have been furnished to them through the pages of *The Cultivator*.

"Blessed are ye that sow beside all waters, that send forth thither the feet of the ox and the ass."—*Isaiah*. S. W. Johnson. *Deer River, Lewis Co., N. Y., April* 15, 1849.

Self Improvement.

"The proper study of mankind, is man."

So thought an old poet, and undoubtedly he was right. But, if we were to judge by the studies pursued by the great mass of mankind, we must come to a different conclusion. The acquisition of wealth seems to be *the* study of the present age, and gold is sought, it may be as eagerly, and at the same expense of health, happiness and life, by him who digs the soil, or wields the hammer, as by the individual that "leaves all" and seeks treasure on the brilliant banks of the Sacramento, and both may be equally deaf to the exhortation of the wise man—

"How much better is it to get wisdom than gold."

Human nature is the same everywhere, its study is the same, and a knowledge of it is of great importance.

"Know thyself." This should be engraven as with the "point of a diamond" on every one's heart, and kept continually before the mind. *Such* a study, rightly conducted and persevered in, would lead to the important duty of self improvement. That should be the object of study. Wiser and better, should be the sentiment. To labor with our hands is not our whole duty The intellect *must not* be neglected. To improve in the management of business, is well; to improve the mind is better, being a greater result, and which will lead to the other.

How shall we improve?

Train the mind to right reasoning. There is a class of persons that are sadly deficient in this important faculty. Rising up early and sitting up late, and laboring hard, they can scarcely keep free from pressing want. The fault is not in their labor, but in their plans,—in the arrangement of their business. They do not adopt the *best* method to perform their labor, and consequently work to disadvantage. It is of no kind of use to be "hurried to death," from early in the spring till late in the fall. Sit down and calculate, taking all things into consideration. See how much you can plow, plant, hoe, and harvest, and then go to work systematically. Not only estimate the amount of your labors, but to do everything the best way, and do one thing at a time. It is folly to commence a piece of work and leave it half finished for something else, to be left incomplete. What ought to be done should be finished, and what ought not to be done should be let alone.

Cultivate order. "Order is Heaven's first law." How much pleasure there is in contemplating a well ordered family, or a *well ordered farm*. But some men are "terrible slack!" Look at their farms and you see it at once. Every thing is at loose ends. Their implements are scattered around, and exposed to all the variations of the weather. The space around their front door, may be, is a repository for hay carts and harrows, sleds and slabs, apple tree brush and ash barrels, and all the odds and ends that accumulate during the labors of the whole year. Where an article was last used, there it may be found. Having "a place for every thing and every thing in its place," will remedy all these evils. But an apple tree is no place to winter a scythe, nor the road side a place to summer a sled. All tools and implements when not in use should be kept under cover.

Be observing. Look around you and see the various methods in which your neighbors perform their labors. Do not suppose for a moment that you know more or can calculate to better advantage than others. Learn from the superior knowledge and tact of all with whom you are acquainted. Make your observation and experience available for your future improvement.

Read, study, and *think*. Every farmer should take an agricultural paper,—and that is not enough. Neither is his duty done when he pays for it. Nor should he be satisfied by simply reading it. It should be studied. Its suggestions should be reduced to practice whenever they can be made beneficial. The knowledge it contains should be treasured up, that we may compare others' experience with our own, and other theories with ours, so that if there is a "better way" we may adopt it. Reason must be exercised in all our labors, and

> "How can we reason but from what we know,"

and how can knowledge in relation to our business be acquired easier or cheaper than from agricultural journals. Strange that so many are blind to their own interests in this respect. The farmer that keeps a dog, or uses tobacco, or takes a political paper, has no valid excuse for not taking an agricultural paper.

Thus I have introduced an important subject and glanced at some of its points. To those accustomed to think, it may be suggestive, and can be considered as its importance demands. W. L. Eaton. *East Weare, N. H.*

Cattle in Chautauque County, N. Y.

Eds. Cultivator—The County of Chautauque, is perhaps, one of the best agricultural sections of the State of New-York, and particularly adapted to the breeding and rearing of stock. Hence it has been an object among our farmers, for a number of years past, to improve the breed of cattle, sheep, and horses. The short horns and that breed crossed with the common stock, have, until recently, been considered the most valuable, and yielding the greatest profit. A few years since the Hereford breed was introduced here,—at first they did not meet with general favor; it was feared that they were too small, and that they would reduce the weight of our cattle. Experience has proved such conclusions entirely wrong. The cross with the Hereford and our cows (they being generally of the short horned descent,) proves to be one of the greatest improvements in the breed of the Chautauque cattle that has yet been introduced, and will add much to the interest of the breeder and farmer. I cannot speak with as much certainty from my own experience, in regard to their quality for the dairy, but those who have proved them, recommend the richness of their milk in the highest manner, and rank them in the first class for the dairy. Thomas B. Campbell. *Westfield, Chautauque Co., N. Y.*

Profits of Fowls.

Eds. Cultivator—In relation to the profits of fowls, I send you the following from my farm-account book:

1848.	
Dec. 1. Commenced wintering 203 fowls, worth 1s. each,	$25 37½
Fed to fowls during the winter,	
33 bushels of corn, at 56 cts.,	18 48
20 do oats, at 31 cts.,	6 20
7 do buckwheat, at 48 cts.,	3 36
Amount of debt, to March 1,	$28 04
1849. January 16th, sold 29 dressed fowls, weighing 70 lbs. at 7 cents per pound,	$4 90
Sold up to first of March, 128½ doz. of eggs, at 18¾ cents,	24 09
Amount of credit up to March 1,	$28 99
Since the first of March, to April 7th, I have sold 134½ doz. eggs, at from 11 to 18¾ cents per doz., which have amounted to,	$17 00
28 doz. eggs on hand, worth 12½ cents per doz.,	3 50
16 hens sitting on 20 doz. eggs, worth,	2 50
	$23 00
To which add income to March 4,	$28 99
Giving a total of,	$51 99
The cost of feeding from March 1. to April 7, was $8.20, which added to the charges of $28.04, up to March 1, makes the whole amount,	$36 24
Showing a clear income to April 7, of	$15 75

I do not keep a particular account of the number of eggs and chickens used in my family, but the number of eggs has been unusually large during the last winter. The eggs frequently, were not gathered till I returned from work late in the evening, in consequence of which, a large proportion of them were frozen, and unfit for market.

I have a very warm hen house, situated over a pigsty, about 12 by 16 feet, with a door on the north side into a warm barn-yard, plentifully supplied with straw. My hens, during the winter, are allowed to roam where they please; but it is seldom they leave the yard. They are constantly supplied with corn in the ear, oats, fine gravel, burned oyster shells broken up, clam shells broken without burning, good water and a bin of ashes, lime and fine sand for them to wallow in. They are also fed every morning, four quarts of shelled corn, also, one peck meal, stirred into hot water until quite thick. The meal is composed of one part cob, one of corn, one of oats, and one of buckwheat, ground very fine. So much for winter management.

During the summer season, when they would otherwise be troublesome, they are confined in a yard contiguous to the *henery* on the north, (containing about ¼ acre,) until after harvest; when they are again set at liberty. My hen-yard is one-third in grass, the remainder is plowed frequently, and two or three bushels of corn, peas, oats and buckwheat, sown on and dragged in. Then for a number of days there is quite a *scratching*, and as the blades spring up, they afford some good picking for the poor prisoners.

My flock is composed of about 145 hens, 15 cocks, and ten guinea fowls. About two-thirds of them were late chickens; some of them have but just commenced laying. I think the chickens and eggs used in my family, with the hen manure, more than pays for my trouble; therefore I make no account of either on settlements with my fowls. My fowls are worth 20 cents apiece.

Cr. by 170 fowls on hand, at 20 cents,	$34 00
Value of the produce sold and on hand,	51 99
Amount of Cr.,	$85 99
Original value of fowls, and cost of keeping to this date,	61 62
Amount of clear profits,	$24 37

Now, you disbelievers in the profits of fowls, show me a case in common stock breeding, where you come as nigh doubling your capital in a little over four months, and the manner in which it was done, without exaggerating, and I will give up that fowls can be equalled, but not beat as to profits. S. O. Cross. *Kingsbury, Washington Co., April* 7, 1849.

Yoke for Unruly Sheep.

Eds. Cultivator—To prevent sheep from becoming unruly, I would recommend good fence; but as they will sometimes get out and subject their owners to much damage and great inconvenience, I will state the mode that I have adopted and found to be good, after a trial of two years.

Take a stick about two or two and a-half inches in diameter, and two and a-half feet long, bore a hole with a three-quarter inch augur about two inches from each end, and from five to seven inches from them, bore another hole. Then take a hickory sprout large enough to fill the hole, put one end in and nail it; bend the other end around the sheep's neck and insert it into the other hole, draw it up just far enough to prevent the animal from slipping its head out, but not so tight as to be uncomfortable, and nail it. Then fasten the other end of the yoke to another sheep, in the same manner, and you have a yoke of sheep. In a day or two, they will learn each other's motion, and will remain quiet through the summer, and without any risk of accidents. I would advise to have the bows bent some few days before they are wanted. Take a stick of suitable size, and about eighteen inches long, bend it to the right shape, and confine the ends until it becomes dry. A Practical Farmer.

A rod of iron with a swivel in it, is much better than a stick of wood, for yoking sheep in the manner above described. The swivel prevents the sheep from twisting each other's necks. But as our correspondent says, it is better to have such fences that no hampering will be necessary. Eds.

Cost of making Pork.

Eds. Cultivator—Having been a constant reader of *The Cultivator* for some time past, and being anxious to know the cost of making pork, I have looked with anxiety for articles on that subject, which would, in some measure, solve the problem; but as yet I have found none. I think the only way by which the farmers can demonstrate it, is, by experiments with various kinds of grain, and on different breeds of hogs, and by preparing the food in various ways, to ascertain what way it will yield the most nutriment—that is, make the most pork. In hopes of inducing some of your numerous subscribers to make experiments, and publish the results, or to publish some already made, by which something may be elicited that will, in some measure, solve the above, I now give the result of feeding 100 bushels of good peas to sixteen hogs, of various mixed breeds, as found in this section. The peas were boiled until fine, making what I call thick soup. After having fed the hogs on the same kind of food for two weeks, I gave them their morning feed, and weighed each one separate noting the weight. Twelve of them were about eighteen months old; one was a three years old sow, and three pigs were seven and a half months old when weighed. I found their total weight 4267 lbs., and after consuming the above amount, which took forty-two days, I weighed them again, and found that they gained 1358 lbs, and on the supposition that as they gained in flesh they shrunk in offal, I estimated their net gain to have been fourteen hundred pounds. Their drink consisted of ten pails of whey per day. It was allowed to stand forty-eight hours and the cream was skimmed off.

I find that there is a great difference in breeds of hogs. The three year old sow was small framed, and pretty full-fleshed, weighing 504 lbs. Her gain in the forty-two days was 66 lbs. The three pigs were from her, and showed traces of three distinct breeds of hogs. Their first weight and gain were as follows:—the first weighed 253 lbs.—gain, 97 lbs.; the second. 218 lbs.—gain, 75 lbs., the third, 171 lbs.—gain, 46 lbs. When butchered, the smallest one was the best pork, being the fattest. Two of the most inferior of the hogs gained one and a half pounds per day. Six, a mixture of the Berkshire, (I should think about one-fourth,) gained 1¾ lbs. per day. Three of the common stock of our country, gained 2¼ lbs.; and one of a superior kind, weighed 318 lbs., and in the forty-two days, gained 134 lbs. They were weighed on the 20th September, the first time. They were kept confined in a close pen, except once a week, I let them out for exercise, and to wallow, for the most part of a day. I fed them all they wanted to eat, without any regard to fear of cloying. Philip Wing. *Farmersville, C. W., February* 2, 1849.

Fattening Calves.

Eds. Cultivator—Allow me through the medium of your valuable paper, to say a few words to the dairy-men of eastern New-York and Massachusetts, respecting the relative advantages of fattening, fit for the butcher, or of destroying (their usual practice,) at four or five days old, their calves, for which, with a little attention, they might realize a handsome item in the yearly receipt for their agricultural products—leaving the inhumanity and barbarity of the practice of *deaconing* them, (as killing young is termed,) out of view. The increasing demand for meats of all descriptions in our markets, points, in my opinion, with unerring certainty, to the course which will bring the most money, with the least labor and expense, into the farmer's pocket, viz.: to make the most and best meat possible, of every animal suitable for the butcher, that he wishes to dispose of. I believe it is a well settled fact by dairy-men generally, that March and the first part of April is the best time for cows to drop their calves. In these months the farmers have leisure to bestow upon them the increased care required; the cows are stronger and more likely to do well than during, or just after a change from dry to green food; they are less liable to have inflamed udders and milk sickness than later in the spring. They shed their old hair better and earlier and go into the pastures stronger. The milk is worth less for butter and cheese, and nearly as much for making veal. There is ample time before your cows go to pasture to fatten every calf, and get for them from $3 to $5 per head. This course saves the trouble of milking in dirty yards or stables, and the dairy-woman from the onerous labor of making butter, or cheese, or both, at this unpleasant season of the year, when labor taxes their powers much more than in a later period of the spring. Let, then, every dairy-man procure a good bull of some of the improved breeds, at least two years old, give his cows good shelter with a little grain, (barley and oats ground together are best,) confine his calves in a pen kept entirely dry and clean, adjoining his cow stables—so situated that he can open a door and let them out to suck after the cows are tied up, with a trough nailed up on one side of the pen and kept well supplied with provender ground from barley and oats, and occasionally sprinkled with very little fine salt. and my word for it, which he can easily prove, he will realise, with less labor, *more pleasure and more cash*, than by the old barbarous practice of *deaconing* his calves. B. A. Hall. *New Lebanon, N. Y., May* 12, 1849.

New-York State Ag. Society.

The Executive Board met at Syracuse on the 10th and 11th of May. Committees to award premiums, and superintendents to direct the arrangements of the different departments of the coming fair were appointed. Grounds have been selected, and proper steps taken for its enclosure, and the erection of the necessary buildings, &c. The location is favorable, being but a short distance from the city, and comprising all the advantages of shade, with pleasant elevation, and suitable dryness of soil. Everything promises an excellent exhibition. We are happy to say that Professor J. F. W. JOHNSTON, of Durham, England, is expected to deliver the address on the occasion. In answer to the invitations extended by the Society, letters have been received from the President and Vice-President of the United States, and the Governors of several of the States, expressing their intention of attending the Fair. The letter of the President is as follows:

Washington, D. C., April 25, 1849.

SIR: I have received your favor of the 12th inst., extending, on the part of the Executive Committee of the New-York State Agricultural Society, an invitation to attend the next annual exhibition of the Society, to be held in September, at the city of Syracuse.

Deeply interested, as I have always been, in the cause of Agriculture, it would afford me the highest pleasure to be present at the exhibition. I shall endeavor to attend, and hope that my engagements will permit me to do so. In the mean time, I beg you to receive for the Executive Committee, my sincere thanks for their invitation, and my best wishes for the success of the cause in which they are engaged.

I remain with high respect,
Your most ob't serv't,
Z. TAYLOR.

BENJ. P. JOHNSON, Cor. Sec. N. Y. State Agricultural Society, Albany, N. Y.

NORTH AMERICAN POMOLOGICAL CONVENTION.—A meeting of this association is to be held at Syracuse, N. Y., on the 14th day of September next, at 10 o'clock, A.M.—that being the day succeeding the closing of the annual Fair of the New-York State Agricultural Society. Though the N. A. Pomological Convention is entirely unconnected with the N. Y. State Ag. Soc., it was deemed advisable for the Convention to meet at the time and place designated, for the better accommodation of the public who will attend the Fair from all parts of the country.

Wool Growing at the South.

EDS. CULTIVATOR—Two communications from southern gentlemen are published in your May number, in which questions are asked relative to sheep. They are referred by you to an article written by J. S. PETTIBONE, in which some of their inquiries ar fully answered; but as you invite further remarks, I submit a few in reference to others, which are not answered in said article.

It is asked, "Are your sheep kept all the time in pasture, &c.?"

In the state of New-York, sheep are mostly kept on enclosed grounds, and with attention to change them frequently, they are generally healthy.

Many good shepherds give their flocks hay, whenever they will eat it, from four to five months in each year.

Sheep are liable to shed their wool when they have been nearly famished by "neglect," and afterwards thrive rapidly on grain or grass. It is desirable to keep them always in good condition, if necessary, with grain: a half bushel of oats daily, is given to a hundred young sheep in the winter season, by some of our wool-growers.

One man, with the exception of procuring fodder, will take care of 500 sheep, and with proper arrangements double that number; but it is doubted by some, whether sheep can be attended as profitably by slaves, as by freemen; where, comparatively, so great care, with so little labor is required; for flocks require care, as well as dairies, to make them profitable.

If the attention of the overseer was directed to the sheep, instead of the slave, that attention, with his labor alone, if devoted to the flock, would most of the year be sufficient; and the capital invested in the slave would be saved, with some "vexation" also; and the interest of said capital added to the slave's clothing, would hire a freeman; and a small number of freemen would build your fences and procure fodder, and might support themselves when old.

My farm contains 210 acres, 170 cleared; on which are kept 500 sheep; the labor is performed by one free, interested man, with the addition of two or three hands one month each year, to assist in getting hay, with but little care or vexation on my part. Instead of expending capital in the purchase of slaves, I would pay a part thereof in wages to freemen, (or to slaves-made free.) Although a present loss is generally sustained by a change of occupation, I nevertheless believe, that an exchange of slave, for free labor, would be profitable, and right; as it is generally admitted slaves are careless and wasteful; while freemen, having different incentives to action, perform more labor, and better.

Would not the advance in the price of your lands, if worked by freemen, be equal to the value of several slaves?

Could the slaves be made free, competent overseers of various flocks, feeling an interest in their improvement, a vast amount of wool might be grown, (profitably no doubt,) in the south-western states, where the winters are mild, and the land cheap.

Many farmers at the north have become wealthy, while others have failed, in the wool-growing business.

One circumstance should be remembered, that many prosperous farmers engaged in the sheep business, have added greatly to their profits by the sale of bucks and breeding ewes, at very high prices, having obtained a reputation abroad; all could not avail themselves of this advantage. A CAYUGA WOOL GROWER. *Kings Ferry, May* 11, 1849.

Rearing and Feeding Stock.

The following is a summary of remarks made by Mr. LYON, in a lecture before the *Derby Farmers' Club*. The principles laid down are worthy of attention:

Young animals grow more quickly for a given amount of food than older. By high feeding, a lamb of Southdown breed (not a large sort) may be 15 or 16 pounds a quarter at a year old; at the same age, a young ox may be from five to six score a quarter. This produce, from the smaller quantity of food which animals consume while young, is equal to what they will yield in any subsequent year, from a larger quantity.

If young animals be reared well, or kept fat from the beginning, they acquire a constitution which ensures their growing more in subsequent years from a less proportion of food. The progeny of well-reared stock improves from generation to generation.

When an animal is in good condition, i yields a greater produce for its food than when it is poor and lean.

If, therefore, an animal be first fed on good pasture till it is fresh and fat, and then removed to poor keep, so as to lose its condition, not only is the food wholly lost on which it declined in flesh, but all the good food which it may consume for some time afterwards has very much less effect.

The feeding of animals should therefore be quite continuous, as well as liberal, in order to be fully profitable.

All animals pay best for that amount and kind of food which causes them to produce most largely. That which makes rearing stock grow and thrive fastest, that which makes feeding beasts or sheep fatten most quickly, and that which makes milking beasts milk most profusely, and for the longest time, is the most profitable kind of food.

The principle of continuous feeding is especially applicable to milking cattle. For if the milk be suffered to fall off, it cannot be brought fully to return, like the fattening propensity; and if, during the interval between the cessation of the milk and calving, the state of constitution which promotes the flow of milk decline, it requires a long period to bring out the full effect of the liberal food given afterwards, and the cow never yields so largely as she otherwise would have done.

It is always profitable to grow on land a succession of nutritious food for all stock kept on it. But in those cases where the natural produce of the land is deficient in richness, or where much straw, in proportion to other forage is grown, or where the casualties of season cause crops of cattle food to be deficient, it is always advantageous to add a portion of artificial strong food, such as cake, or corn, or linseed, to the food of animals, whether rearing, feeding, or milking stock

Smoking Potatoes for the Rot.

I have been informed by a gentleman of my acquaintance, that he had stopped his potatoes from rotting by smoking them. After the potatoes were dug and placed in the cellar, (an out door cellar,) he built a smoke and continued it eight or ten days, when the affected part dried up, and the rest of the potatoe remained sound and good through the winter. The remedy was discovered by placing fire in an unfinished cellar, to prevent the vegetables from freezing—immediately after which it was found that the potatoes had stopped rotting. He says he has tried the experiment for two or three years past, and has never known it to fail of arresting the disease immediately. O. P. K. *Green Bay, Wisconsin*, 1849.

Preservation of Wood.

Some experiments made in England show that soaking wood in lime-water effects its preservation to a remarkable degree. A house was erected forty years ago, in which Scotch fir was used for timbers. A portion of the timber was soaked in lime water, and a portion used without such preparation. The former is still sound, while the latter is much eaten by worms, which, as is well known, usually destroy this kind of wood in a few years. The method of saturating the wood is described as follows: "In preparing wood for the purposes of building saw it into such lengths as the occasion demands; next, plunge the planks or beams into a pond of lime-water. The pond is made thirty or forty feet long, five or six feet deep, sixteen or eighteen feet wide; and the bottom and sides are rendered water-tight. It is then filled with cold water. Before receiving the wood, a quantity of fresh-burned hot lime is thrown into the pond, which is well-stirred with the water to dissolve as much as possible of it. Into this strongly impregnated solution of lime-water, the wood, in the various shapes it has been sawn into, is then thrown. As lime-water absorbs carbonic acid from the atmosphere, the lime previously held dissolved in the water becomes insoluble, and is slowly abstracted from the water, and deposited at the bottom in a solid state, as mild lime or carbonate of lime; hence the necessity of now and then throwing in fresh portions of recently calcined lime, that the water may be resaturated with the strongest solution of this caustic alkaline earth "

The timber remains in the water from two to three weeks. The lime is absorbed by the pores of the wood, and appears to destroy the albuminous and saccharine principles, or so changes them that the wood no longer affords the food on which worms subsist. The slight petrifaction which the wood thus undergoes, prevents air and moisture from penetrating it, and renders it almost indestructible. It should be thoroughly seasoned before it is used.

Experiment with Potatoes.

Eds. Cultivator—If you think the following account of an experiment on a small scale, worthy a place in your columns, it is at your service.

About the 22d of May last, I planted in my garden four hills of potatoes, three feet apart, at the corners of a square, thus:—A B
C D

In each hill was placed about a pint of charcoal dust, with no other manure. Two potatoes were cut in two lengthwise, and half off each potato put into each of the hills A and B. Two other potatoes were divided between hills C and D in the same manner. This was done that the seed in A and C might be as near like that in B and D as possible.

June 13th—The potatoes were hoed, and manured with a compost of one part guano, one part charcoal dust, and three parts earth, which had been mixed three or four days, and stirred several times during that period,—a handful of the compost being hoed into each hill.

June 20th—The stalks being from six to ten inches high—the end of every stalk and twig of hills B and D was picked off, those of hills A and C being left untouched. The number of stalks in A and C was precisely the same as the number in B and D. They were hoed twice more, but no more manure was applied.

About the 20th of July, the ends were again broken from every stalk and twig of hills B and D—A and C being left untouched, as before. A few of the leaves dried up during a drouth in the latter part of summer; no symptom of disease appeared, however. The vines dried gradually, and on the 12th of October the potatoes were dug, washed, and when dry, weighed. No diseased ones were found. The potatoes have been preserved to the present time, without any appearance of disease. They are of an irregular shape, yellow, with pink eyes; the name of the variety I do not know.

The potatoes from A and C, weighed 6 lbs. 9¼ oz., those from B and D, 7 lbs 1 oz. The largest potato from A and C weighed 7 oz.; three from B and D, weighed 8 oz. each. Those from A and C measured just half a peck, heaped measure; those from B and D a little more. A and C produced 33 potatoes, only four of which weighed less than 1 oz. each; B and D produced 37 potatoes, only five of which weighed less than 1 oz. each.

The only difference in the treatment of the two pairs of hills consisted in topping the vines of one pair, and leaving the other untouched. The result can afford no aid in the decision of the question whether topping the vines will prevent decay, as no decayed potatoes were found in any of the hills; and indeed, not in this region, as far as the writer's knowledge extends. The treatment may, however, have a tendency to increase the crop. The hills not topped produced at the rate of 302¼ bushels to the acre, allowing a square yard to each hill; while the hills topped produced 1-14th more, or 324 bushels to the acre. Whether the extra 21¾ bushels would pay for the extra labor, is a question. The end might be partially secured by mowing the tops twice during the season, before the vines begin to fall upon the ground, care being taken not to cut them too short.

It would have given me pleasure, and would have been more satisfactory, to have been able to try the experiment on a larger scale; but a lot 100 feet by 30, with a house and grass plot occupying more than half of it, does not furnish very extensive facilities for farming purposes. ROBERT D. WEEKS. *Newark, N. J., March 6th*, 1849.

Rust in Wheat.

The Directors of the Saint John (N. B.) Agricultural Society, in their report for the year 1848, make the following remarks as one of the causes of rust in wheat. They observe that the ideas are thrown out rather as a supposition than an opinion, and are designed to excite inquiry:

"The oat draws nutriment from the earth by side roots, which spread *over* the ground. The wheat plant has similar rootlets; but in addition thereto, when about to head, sends down a tap root into the earth, for the purpose, it may be presumed, of procuring that additional nutriment which its large rich ear requires; and this tap root has been known to go down to the depth of four feet. We may observe, that up to the time of sending down the tap-root, the wheat is the hardiest and thriftiest of all the cereals, but afterwards the most liable to disease. This delicacy is readily accounted for, when we consider that land is generally undrained —that not more than a few inches of soil get the benefit of sun, air and manure, and that, therefore, the root must encounter in its downward travel, nothing but disappointment. It comes in contact with the cold clay, or a sour, wet subsoil, turns back in despair and dies. In accordance with the laws of nature, insects or rust, which is itself a fungus, or vegetable insect, comes to finish the work of devastation on the dying plant. The forlorn farmer rails at the climate, and cries out that his wheat is killed by rust, while in fact it has died from starvation—from the want of that food which, as a provident husbandman, it was his duty to have provided for it."

Barn for Cows.

EDS. CULTIVATOR—Traveling in 1848, in the great dairy district of Ohio, the Western Reserve, I became acquainted with your paper, which I found among the dairymen there. I immediately ordered *The Cultivator* for myself, and have since been in regular receipt of it.

As I became convinced of the profits of dairying while among my friends in Ashtabula and Trumbull counties, Ohio, I determined to turn my attention more particularly to that branch of business. In January, 1848, I bought twenty cows—having previously kept sixteen. To my friends in Ohio, and to your paper, I am mostly indebted for my knowledge of dairy management. In November last, I commenced building a barn for my cows, something on the plan given in *The Cultivator*, in the June number, 1847. There is an aisle through the centre of the barn, lengthwise, a manger and trough for each cow, a platform on which the cows stand, a gutter to receive the manure, and a walk next the wall, on which to set and carry milk.

I had studied much for the best method of removing the manure from the barn, and how or where to secure it from wind and rain, and how to save the urine, when taking up *The Cultivator* one evening, I found a cellar mentioned for the purpose. This was a new idea to me, and I regretted that I had not received it before. However, I then got screws and raised my barn so as to admit of a cellar. This improvement I consider of great importance. I shall probably use a part of the cellar for storing carrots, which I shall raise for my cows. G. A. HANCHET. *Potsdam, N. Y*

Artificial Fish-Ponds.

The *Ohio Cultivator* gives the mode of constructing fish ponds, as practiced by JACOB HOFFNER, near Cincinnati. He says much care should be taken to prevent leakage, especially when craw-fish abound. These animals make holes through embankments, and let off the water. To guard against this, the sides should be lined with lime cement. The ponds should be made of irregular shape, having shallow bays and estuaries, where the smaller fishes can sport out of the reach of the larger ones, which seek to destroy them. It is observed that, unless the pond is quite large, so as to afford them sufficient range to gather insects and vegetable substances, the larger kinds of fishes, must be fed two or three times a week, with scraps of bread, meat, and other refuse matter from the table and kitchen; but the gold fish, and other small kinds, even though confined to limited space, seem to thrive best without any other food than that derived from the water, and the small animal and vegetable substances that may be found therein.

Notices of New Publications.

PIONEER HISTORY OF THE HOLLAND PURCHASE of Western New-York: embracing some account of the Ancient Remains; a brief history of our immediate Predecessors, the Confederate Iroquois, their system of Government, Wars, &c., a synopsis of Colonial history: some notices of the Border Wars of the Revolution: and a history of Pioneer Settlement under the auspices of the Holland Company; including reminiscences of the war of 1812; the origin, progress and completion of the Erie Canal. By O. TURNER. Buffalo, JEWETT, THOMAS & Co.

The "Holland Purchase" originally embraced that portion of the State of New-York now comprehended by the counties of Allegany, Wyoming, Genesee, Orleans, Cattaraugus, Erie, Niagara and Chautauque—a tract containing nearly four millions of acres. The design of the author of this work, as expressed in the title, has been to embody the principal events connected with the settlement of this region, from the first attempt of the French to colonise it, and its subsequent purchase by the Holland Company, down to its rapid improvement in population and wealth, after the construction of the Erie Canal. Events not regarded as belonging to the *pioneer* history of this section of country, have been purposely omitted, as inconsistent with the plan of the work; but a mass of very interesting and valuable matter has been collected, which does great credit to the industry of the author, and cannot fail to be highly appreciated by the people of Western New-York, many of whom have a direct and personal interest in the scenes so well portrayed in this volume. Several biographical sketches, with portraits, are given of prominent individuals, who were in various relations connected with the settlement and early directions of public affairs in the district. The book is handsomely printed, and contains 666 pages, octavo. It will be seen by the following certificate, that this work is recommended for School District Libraries; a recommendation in which, especially so far as relates to Western New-York, we heartily concur:

Albany, April 28, 1849.

From the examination which we have been able to give to the "History of the Holland Purchase," by ORSAMUS TURNER, Esq., we consider it a work of great interest and of much intrinsic value. It embodies a mass of authentic information, exhibiting in a clear light the early annals of Western New-York, its tardy advances in settlement during the period anterior to the last war with Great Britain, many incidents of the war and the subsequent condition of the settlements, and the rapid developement and improvement of the country, since the completion of the Erie Canal, thus presenting a view of American progress, which can hardly fail to be acceptable to intelligent minds. Deeming it desirable that the local history of the several sections of the State should be preserved and disseminated, we cordially recommend this volume, as a production highly creditable to its author, and worthy a place in the School District Libraries of the State.

CHRISTOPHER MORGAN.
WASHINGTON HUNT.
ALVAN HUNT.

THIRD ANNUAL REPORT OF THE BOARD OF AGRICULTURE OF THE STATE OF OHIO.—This report, like those which have preceded it, consists chiefly of statements in regard to the products and condition of agriculture in the several counties of the state. They show, generally, an improvement in most departments of husbandry. The President of the Board states that an increasing taste for agricultural reading is being manifested among the people of Ohio, and that "the spell which so long bound them to the traditions and practices of their fathers is partially broken." Ohio has great natural advantages, and we are happy to see that progress is made in their development. The board have resolved to hold a State Fair at Cincinnati, on the 5th, 6th and 7th of September next. A large amount of money is offered in premiums, which are open to competition from other states, and there will be an extensive and interesting display.

CHEMICAL TECHNOLOGY; or chemistry applied to the Arts and Manufactures. By Dr. F. KNAPP, Professor at the University of Giessen; translated and edited, with numerous notes and additions, by Dr. Edmund Ronalds and Dr. Thomas Richardson. First American edition, with notes and additions by Professor Walter R. Johnson, of Washington, D. C.

This excellent work consists of two handsome octavo volumes, printed and illustrated in the highest style. The first volume has been previously noticed in our columns; the second is before us, and is deserving of the same high praise which was bestowed on its predecessor. It is a work of great value, written by one who has evidently devoted much study and practice to the subjects on which he treats. It includes the most recent improvements in regard to chemical processes, and the illustrations are full and complete. The present volume contains two hundred and fifty wood engravings. Published by LEA & BLANCHARD, Philadelphia.

THE AMERICAN BEE KEEPERS' MANUAL; being a practical Treatise on the History and Domestic Economy of the Honey Bee, embracing a full illustration of the whole subject, with the most approved method of managing this insect through every branch of its culture, the result of many years' experience: By T. B. MINER. New-York: Published by C. M. SAXTON.

This is a work of 334 pages, "got up" in a very neat style, and illustrated with well-executed wood engravings. The author has made a readable book, giving directions for the management of bees, based, generally, as he informs us, on his own "practical experience" extending through "many years." His views on many points, are different from writers who have preceded him. Those interested in the subject will, of course, examine, compare, and judge for themselves. He is pretty thorough in his "condemnation" of "patent" hives generally, and were it not for the encomi[illegible] bestowed on one styled "*Miner's Patent Equilateral Beehive*," which he considers the "*ne plus ultra* in every point," we might almost be led to infer that there had been no improvement on the most primitive structures for bees. This last mentioned hive is not fully described, as the author thinks "the full particulars cannot be given and do justice to himself." It obviously has merits however, though we confess our inability to discover its superiority, from what the author allows to be made public, over some other hives with which we have had more or less acquaintance for twenty-five years.

Answers to Correspondents.

COMPOST.—Ontario Farmer. The addition of lime to your manure would tend to liberate the ammonia, and we do not see that it would be any benefit to the materials you mention. See an article on composts in this number.

CABBAGES.—B., Montgomery county, Pa. The best soil for cabbages is a deep moist loam. The plants are set from two to three feet apart, according to the size of the variety. The price in this market is from two to four cents a head in the fall, and five to eight cents in spring. We are not prepared to give any definite information as to the quantity or price of *krout* sold in the "principal markets." Inquire of some one connected with the vegetable market in New-York.

BROOM CORN FOR SOILING.—P. S. B., Petersburgh, Va. It is not so good as the common corn. It has been tried, but the stalks are not well relished by any kind of stock.

POTATO DISEASE.—S. A. B., South Edmeston, N. Y. For experiments with lime and other substances in connexion with the potato disease, we refer you to our back volumes, especially to that for 1848, pp. 191—2.

POULTRY.—J. V. K., New-York. The breeds of fowls combining most "beauty" with the qualification of "good layers," and a "substantial carcass for the table," are the Black Spanish, Dorking, Game, and some varieties or crosses of the Malay, when *well bred*—such as those called Chinese, Jersey Blues, &c. The extent of ground for the confinement of fifty fowls, ought not to be less than one-fourth of an acre. One cock will answer for ten hens. For the production of eggs, it is not indispensible that a cock should be kept with the hens, and for "market purposes" it makes no difference in the value of the eggs. We are not aware that any experiments have ever definitely settled the question whether the *number* of eggs is increased or diminished by cocks being kept with hens. To *make money* by rearing "fancy poultry," skill and attention, with ample accommodations are required in breeding and management. It is not every one that can breed pigeons or other birds "*to a feather*," but there are some who can. For feeding fowls, a variety of grains and other food, is preferable; but if only one kind can be had, we should choose wheat screenings or buckwheat.

CHARACTER OF SOILS.—A. S. H., Bethlehem, Pa. The information you desire, could, probably, be given by a man of good practical observation, who was acquainted with the different kinds of soil, as they are commonly designated. Such a person is generally able to form a pretty correct opinion as to the capabilities of a soil, and its adaptation to different crops. It is in this way that lands are usually selected, though we have no doubt that analysis would, in many instances, suggest useful ideas.

SAXONS *vs.* MERINOS.—E. H., Cleveland, Ohio. The *match* which was to have taken place as arranged at Lowell, a few years since, never "came off."

Notes for the Month.

Communications have been received since our last, from Agricola, Charles R. Alsop, P. S., B., L. Durand, G. W. Barnett, Ontario Farmer, Polydamas, A Subscriber, W. Torrey, Reviewer, Penneypack, Henry Ancrum, B. A. Hall, L. A. B., P. and S. A. Wood, A. L. Fish, Northerner, J. V. N., W. L. Eaton, W. R. S., S. B. Buckley, A. K., A Cayugua Co. Woolgrower, Lotan Smith.

Books, Pamphlets, &c., have been received as follows:—Third Report of the Board of Agriculture of Ohio, from M. B. Bateham, Esq.—Knapp's Chemical Technology, vol. II, from the publishers, Messrs. Lea and Blanchard, Philadelphia.—Miner's American Beekeeper's Manual, from the publisher, C. M. Saxton, New-York.—A large package of Shrubs and Plants, from John J. Thomas.—A package of Plants from Col. M. P. Wilder, Boston.—Report on the Breadstuffs of the United States, made to the Commissioner of Patents, by Lewis C. Beck, M.D., from the Patent Office.—Pioneer History of the Holland Purchase, by O. Turner, Esq., from the publishers, E. R. Jewett & Co., Buffalo.

☞ Mr. Samuel Riddle, of Pittsburgh, Pa., is an authorised Agent for "The Cultivator," and "The Horticulturist."

Agricultural College and Experimental Farm.—In our last, we mentioned the steps which had then been taken in reference to this institution. Two of the commissioners whose names were given, Messrs. Wadsworth and Lott, having declined their appointment, their places were filled by Hon. John Greig, of Ontario county, and E. C. Frost, Esq., of Chemung. The Board met in this city on the 16th of May, and organized by the choice of Mr. Greig, as President—Mr. B. P. Johnson, acting (by request) as Secretary. The general outlines of a plan were agreed on, and a committee, consisting of Messrs. Beekman, Downing, Blunt, Cheever and Risley, was appointed to prepare details, to be submitted to the Board at their next meeting, which is to be held at Syracuse, on the first day of the State Fair—11th of September next.

Prof. Norton's Lectures.—We learn that the course of agricultural lectures delivered by Prof. J. P. Norton, of Yale College, during the past winter, was received with great approbation. Mr. L. Durand, of Derby, Ct., who attended the course, informs us that his class consisted of 25 members, most of whom were young farmers. Mr. D. speaks in high terms of the practical value of the instruction given by Prof. N., in which expression, he says, all the pupils entirely concur.

Esterly's Harvesting Machine.—In *The Cultivator* for 1845, page 25, we gave a cut of this machine. The inventor has been almost constantly engaged for two or three years past, in improving its construction and operation. We see by notices in the *Prairie Farmer*, that several farmers have used it with great success. Elijah Wilcox, of Elgin, Kane county, Ill., states that he used it last year, and was able to gather fifteen acres of wheat a day—"taken in fair standing order." The force required to do this, was three men, two boys, (twelve and fifteen years old,) and four horses. Two horses could propel the machine, but its operation was better with four. He says all the labor was done by horse power, except pitching the grain from the machine, and stacking it. He comes to the conclusion that "it is the neatest and most perfect way that crops were ever gathered." The machine gathers the heads of the grain, which are put up in ricks or stacks. Mr. W. says it came from the stacks, when taken for threshing, dry and in good order, not a bushel in 500 being in any way injured.

The Season.—Notwithstanding the mildness of the first part of the winter, and the sudden transition to extreme cold, the prospect is good for most kinds of fruit, in this vicinity. South of Philadelphia, as we are informed, a large portion of the fruit was destroyed by the unusually cold storm which occurred about the middle of April. Here, the buds were so little advanced that they generally escaped injury. Of peach blossoms, we had but few, but of apricots, plums, and cherries, there was a good show. Pears and apples bloomed well. We had a great lack of moisture, in this section, from the first of February to the middle of May, while at the same time, the country at the south-west was deluged with rain. Of late, we have been favored with light rains, which have answered the purposes of vegetation.

Culture of Flax.—A correspondent at Mt. Vernon, Ohio, states, that he has been informed that a kind of flax is raised in some of the eastern states, perhaps New Jersey, which produces from 18 to 20 bushels of seed per acre; and wishes to know whether such is the fact; if so, what is the name of the variety, and where can the seed be had. He wishes to know, also, the best kind of flax for lint. We shall be pleased to receive any information in regard to this subject.

Albany and Rensselaer Horticultural Society.—We have received the Second Annual Report of this Society, giving its proceedings for 1848, and a list of premiums for 1849. There are to be five exhibitions during the year, all of which to be held at the Old State Hall, Albany. The first is to be on the 13th of June. The funds of the Society having been considerably augmented, the premiums have been proportionately increased and enlarged, and we presume the exhibitions will be superior in extent and variety to those of former years.

Sheep Husbandry.—We have received a circular from Mr. H. Ancrum, of Ashby, Pike co., Missouri, in relation to forming a joint stock company for keeping sheep, on a large scale. He proposes to furnish the land and all necessary management for the sheep, himself; but he does not definitely state the terms on which the business is to be regulated, and the profits divided. He states that he has had twenty years' experience in Europe and nine years in this country, in the management of sheep, and can show satisfactory testimonials of his ability in this respect. We presume particulars in regard to his plans can be learned by application to him.

A Good Example.—Mr. C. T. Alvord, of Wilmington, Vt., writes,—"I may be mistaken, but I think this town, for this year, will bear a favorable comparison with other towns, as a reading community, all things being taken into consideration. We take, at the present time, 83 copies of The Cultivator, between 40 and 50 of the School Journal and Vermont Agriculturist, about 12 of the Boston Cultivator, 6 of the New England Farmer, and 1 of the Genesee Farmer; these being about one-half of the regular newspapers taken in the place. The town embraces a section of country six miles square, lying on the eastern slope of the Green Mountains, and containing one of the highest peaks within the boundaries of the state. The surface is generally rough and uneven, and a large portion of it yet remains covered with timber. The inhabitants, about 1200 in number, are mostly engaged in that part of agriculture which consists in the raising of neat stock, and the manufacture of butter and cheese, to which is added, in the spring season, the making of maple sugar."

The Horticulturist, and Journal of Rural Art and Rural Taste. Edited by A. J. Downing, Esq., author of "Landscape Gardening," "Fruits and Fruit Trees of America," and other works.

The third volume of this work is just brought to a close; the fourth will commence in July. The steady increase of its subscribers, and the constant demand for back volumes, evince the value of the work in the public estimation. It will continue under the supervision of Mr. Downing, and will as heretofore, receive the contributions of the most able horticulturists in the country; and no pains will be spared, either on the part of editor or publisher, to sustain the reputation and high character of the work. It is published on the first of each month, by the proprietor of *The Cultivator*, at $3 a year—each number containing 48 pages, printed on fine paper, and executed in a style equal in every respect to the best periodicals in the country.

American Journal of Science and Arts.—The number of this work for March, contains, among other articles, the following: Notice of and Citations from a Voyage of Discovery and Research in the Southern and Antarctic Regions, during the years 1839—43, by Capt. Sir James Clark Ross; on the Fundamental Principles of Mathematics, by Prof. Stephen Alexander; On a New Table of the Pressure of Steam at various temperatures, by J. H. Alexander; On the Dispersion of Light, by Prof. Chas. G. Page; Observations on some points in the Physical Geology of Oregon and Upper California, by James G. Dana. Published at New Haven, Ct., every second month, at five dollars a year. Conducted by Messrs. Silliman & Dana.

Mildew on Grapes.—W. L. E., East Weare, N. H. Various writers recommend the use of sulphur as a remedy for mildew. If the grapes are in a house, the floor is to be dusted with it, early in July. If the fungus makes its appearance, the floor is to be syringed and the foliage and fruit dusted with the sulphur.

Commissioner of Patents.—We are gratified to learn that Thomas Ewbank, Esq., has been appointed Commissioner of Patents for the United States. Mr. E. is thoroughly acquainted with the science and history of mechanics, as is proved by the valuable works he has written on the subject, and we think it fortunate for the country that a person of his attainments has been secured for that important station.

Manufacture of Agricultural Implements in Albany.—By reference to the advertisement of Mr. Emery, in this number, it will be seen that Messrs. Wheeler & Co., have removed their establishment for the manufacture of horse-powers and other machines and implements, from Chatham to this city, and have commenced operations on a large scale in the new building lately erected by Mr. Emery.

A fine Horse called "Morgan Hunter" was lately taken through this city by Mr. Wier, of Walpole, N. H., and sold, as we learn, to Messrs. H. R. Ackley and A. S. Gilbert, of East Hamilton, Madison county, N. Y. He was got by "Gifford Morgan," and his dam was by the same horse. Persons who want to know what a Morgan horse is, will do well to examine him.

Protection of Turnips from the Fly.—White mustard, sown with turnips, is considered one of the best means of protecting turnips from the insects usually called *the fly*—a species of *haltica*—which devours the plant as soon as it makes its appearance above ground. Large crops are often thus destroyed in a single day. The advantage of the mustard is, that it starts quicker than the turnip, has a large and tender seed-leaf, which the insect is quite as fond of as of the turnip, and being so much more conspicuous, the mustard is eaten and the turnip saved till it gets into "rough leaf," as it is termed, in which state it is generally safe from attack.

Professor Johnston.—We have stated in another place that this gentleman, so well known as a chemist and writer on the sciences connected with agriculture, is expected to deliver the address before the New-York State Agricultural Society, at its meeting at Syracuse. He will probably arrive here as early as the month of August, and, as we are pleased to learn, contemplates spending several months in the different sections of our country. We are informed that he has consented to deliver a course of lectures before the Lowell Institute at Boston, during the next winter; and we hope other associations will avail themselves of the opportunity of securing his valuable services while he remains among us.

Mr. Vail's sale of Short Horns.—It will be remembered that this important sale takes place on the 13th instant. It will, probably, call together a large number of farmers, who will avail themselves of this opportunity of obtaining fine animals of this celebrated breed.

The following is a copy of a letter lately received by Mr. Vail from Col. Wade Hampton, of South Carolina:

"*Dear Sir*—The bull I purchased of you, is not only the best I have ever had, but superior to any I have ever seen. His get are very beautiful, and exhibit all the evidence of high blood. I have been a breeder of Short-horns for nearly forty years—have imported several bulls, and bought at various times, others, from the best herds at the north, but have never owned one whose stock has given me such entire satisfaction. W. Hampton."

Farming in Aroostook.—A correspondent of the *Maine Farmer*, states that he began farming in this district in 1846. He gave one dollar an acre for his land in the "wilderness state," and three dollars an acre for felling trees, and one dollar an acre additional for "chopping the limbs,"—making the cost of clearing, including the board of the men, eight dollars per acre. He gives the following account of the profits of an oat crop produced on three acres of this land. He sowed six bushels of "small Russian oats" on the three acres, in the spring of 1848, and the yield was 225 bushels, weighing 35 to 38 pounds to the bushel, and yielding 22 pounds of meal to the bushel, deducting from which one-sixth for the miller's toll, leaves 18⅓ pounds to the bushel, worth $5 per hundred. The account is stated thus:

Dr.—To felling and clearing three acres of land,	$36 00
Six bushels oats for seed,	5 00
Myself two hours to sow same,	50
Boy and horse three days to harrow them in,	4 50
Twelve days' reaping, binding and shocking.	18 00
Man, boy and team 1½ days, to haul them to barn,	5 00
Man 12 days in winter to thresh them out	15 00
Taking them to mill and returning meal, 15 miles,	13 00
Total.	$99 00
Cr.—By 225 bushels oats, giving 18⅓ lbs. meal per bushel, 4125 lbs. meal, at 5 cents per lb.,	$206 25
Cost of crop,	99 00
Leaving a profit of,	$107 25

The Russian oats spoken of, are said to be a variety particularly adapted to the rich soil of Aroostook. They do not grow as high as the common oat by ten or twelve inches; are fine-strawed, and seldom lodge so as to injure the grain; are two weeks earlier than the common oat, and are said to make the best meal of any variety.

Extirpation of Garlic.—A subscriber at Cornwall, N. Y., wishes information in regard to the extirpation of the "wild onion," by which it is presumed is meant garlic, that being in several sections of the country, a troublesome plant. We have had no experience with it, and should be obliged for any remarks from those who have been successful in getting it out of their grounds.

Prices of Agricultural Products.

New-York, May 22, 1849.

FLOUR—Genesee, per bbl., $5.12½a$5 25. Western, $4 31a $4.44.

GRAIN—Wheat, per bush., Genesee, $1.23a$1.25—Ohio $1.03 Corn, Northern, 62c.—Southern, 55a59c. Rye, 58c. Oats, 33½a 31½c.

BUTTER—best, per lb., 19a20c.—western dairy, 10a14c.

CHEESE—per lb., 4a7c.

BEEF—Mess, per bbl., $11a$11.50—Prime, $8.50.

PORK—Mess, per bbl., $9 87a$9.94—Prime, $8.25.

LARD—per lb., 6½a7c.

HAMS—Smoked, per lb., 7a9½c.

HEMP—American dew-rotted, per ton, $155.

HOPS—new. per lb., 7½c.

COTTON—Upland and Florida, per lb., 6¼a8c.—New Orleans and Alabama, 6½a8½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

REMARKS.—The demand for flour and meal is quite brisk. Grain is generally dull. For pork, the market is heavy—lard is in good demand. Cotton is firm with sales.

New Cheese Press.

DICK'S Patent Cheese Press, a new, more simple and complete cheese press, than ever before offered to the public. It needs but to be seen to be approved, and when known, will be adopted by nearly all large cheese dairymen. All are warranted.

For sale at the Albany Agricultural Warehouse.

Nos. 369 & 371 Broadway, Albany, N. Y.

HORACE L. EMERY.

☞ Price and descriptive catalogues, Gratis.

Haying and Harvesting Tools.

Grain Cradles.—Grant's, and Myers & Bryan's, both premium cradles.

Grass and Grain Scythes —Dunn's and Troy, (premium scythes.)

Revolving Horse Rakes —Wilcox and Downer's, " rakes.

Hand and Gleaning Rakes, of various makers.

Scythe Snaths —Clapp's, Lamson's and others.

Sickles, Rifles, Scythe Stones, &c., &c.

Anti-friction Rollers and Cranks for Grindstones.

Grindstones hung complete for use.

Also, every Implement, Machine and Seed wanted by the farmer. All warranted. Constantly for sale at the Albany Agricultural Warehouse, Nos. 369 & 371 Broadway, Albany.

H. L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Merino Sheep.

THE subscribers are now sending into the west—Ohio, Illinois, Michigan, &c.—some choice sheep from their respective flocks —pure blooded Merinos. Most of them are one and two years old this spring, and are the product of our merino ewes, purely bred, by the bucks of the importation of 1840 by Mr. Collins, and of the importations of Mr. Taintor of 1846, 1847, and 1848. We feel assured that these sheep will prove a valuable acquisition to the sheep masters and wool growers of the West. They are sheep of unquestionable merit. To prevent imposition—inasmuch as many worthless sheep are annually sold as coming from our flocks, we name our salesmen :—Messrs. S. B. ROCKWELL, JOHN CAMPBELL, SYDNEY BYINGTON, CHARLES TAYLOR and H JOHNSON—who will at any time show their commission over our own signatures. Any statements made by them may be relied on, and the public may have confidence in them as men of worth and character.

L. G. BINGHAM.
MERRILL BINGHAM.
Vermont, June 1, 1849.—1t. A. L. BINGHAM.

A Virginia Farm

FOR SALE, within sixteen miles of Richmond, Va., containing 253 acres of superior land, well adapted to the culture of wheat. corn, oats and potatoes. The James River and Kanawha canal runs through the premises. The situation is truly splendid, viewing the surrounding country many miles. There is a very fine orchard of apple, pear, cherry and peach trees--many fine springs of superior water. The house has just been put in good repair. The outhouses are nearly all new, built in the best manner, and can accommodate 30 head of horses and cows. There are two churches, a post office, tavern add physician quite near. Also, a market for all kinds of fowls, meat and vegetables, within one-quarter of a mile from the farm. A saw and grist mill also in sight. One of the owners is going to California.

All information will be given. by applying, post paid, to

B. B. ALLEN, No. 19 Platt st., New-York.

June 1, 1849.—1t.*

NOW IN THE PRESS.

TO BE PUBLISHED ON THE FIRST OF AUGUST.

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain more than

TWO HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work ; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves ; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole will form a handsome duodecimo volume, at the low price of One Dollar. June 1, 1849.

Short-Horns at Auction.

THE subscriber being about disposing of 50 acres of his farm, for public purposes, will offer at public sale 30 head of Short-Horn Durham Cattle, (being about one-half of his present herd,) at his farm, 2½ miles from this city, on the 13th day of June next, at 11 o'clock in the forenoon, consisting of yearling, two year old and three year old heifers and cows, and 11 young bulls, from 10 months to 2½ years old. Great care has been observed and considerable expense incurred, in selecting and breeding this stock with reference to purity of blood and dairy qualities. The awards of the New York State Ag. Society, and the N. Y. American Institute, attest the estimation in which it is held, wherever it has been exhibited for competition. About eight head of the above cattle, are part of a purchase made last May, of E. P. Prentice, Esq., of Albany, embracing all the Short Horns of that gentleman, and were the product of the four selected cows he retained at his public sale, and possessed much of the blood of the herd of Mr Whittaker, of England, from whom Mr. P. made importations of stock. The other portion of the young stock inherit much of the blood of the herd of T. Bates, Esq. of Yorkshire, Eng, from whom my importations have been made, being one and two crosses of the imported bull Duke of Wellington, and the premium bull Meteor. All the heifers of suitable age, are or will be in calf by these bulls.

For the information of Southern gentlemen, who may be desirous of introducing Durham stock in that region, and who may entertain an opinion, that that climate is not congenial to their successful propagation there, I submit the following extract of a letter I received from A. G. Summer, Esq., editor of the South Carolinian, dated Columbia, January 25, 1849:

" The bull you sold Col. Hampton, of this State, gives him great satisfaction; he is a fine animal, and I only wish you could see some 20 of his get, now in his yard. They are the most superb yearlings ever bred in the South, and your stock will not suffer from him." The pedigrees of the animals will be issued and circulated a month previous to day of sale. A liberal credit will be given —say 6 to 12 and 18 months, if desired The particulars will be given in the pedigree list. GEO. VAIL.

Troy, April 1, 1849.—3t.

Books for Rural Libraries.

THE following works are for sale at the office of THE CULTIVATOR, No. 407 Broadway, Albany:

American Agriculture, by R. L. Allen, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole, 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $3.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Animals, by R. L. Allen, 75 cents.
Dictionary of the Farm, by W. L. Rham, (English,) $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing. $3.50.

Farm for sale in Virginia.

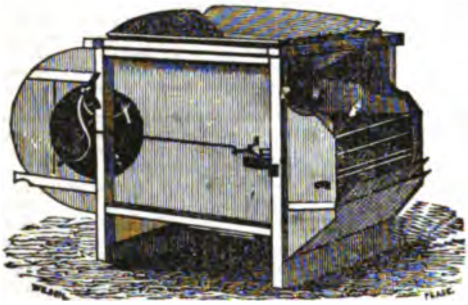
THE subscriber having resumed his former occupation in the city of Albany, offers for sale his farm, near Prospect Hill, Fairfax Co., Va. This farm is pleasantly situated within eight miles of the city of Washington, and six from Georgetown, on the main road leading from the Capitol to Fairfax Court House, in a healthy location, with a fine prospect of the surrounding region, and in an excellent neighborhood. It adjoins the plantation of Commodore Jones, and formed originally a part of his estate—is under good cultivation—and has on it a new and commodious two story house, finely siuated in a grove of forest trees. A good barn and stables, two good wells of water, and a thriving apple and peach orchard, with an abundance of quince trees, cherry trees, &c. There are eighty acres of land belonging to the farm, which is well fenced, and has an abundant supply of wood. To any person desirous of taking up his residence in Virginia, no more eligible situation could be offered. The premises will be sold on very liberal and accommodating terms.

Communications addressed to the subscriber, at the office of the Secretary of State, Albany, will meet with prompt attention.

Albany June 1, 1849.—1t. S. S. RANDALL.

I. T. Grant & Co.'s

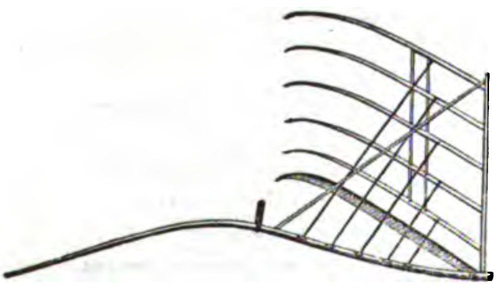
PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon. J. R. Poinsett, of South Carolina:—" The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—" Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.
Junction P. O., Rens. Co., 8 miles north of Troy.
May 1, 1849.—5t. eom.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown tobe of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by **STIMPSON & REED**, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. June 1.—3t.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone.*

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words " The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Palmer's Wheat Drill.

IT is an established fact that the drill culture is far superior to any other, and the only safeguard from drouth or "*winter-killing*."

It is also a fact that J. A Holmes & Co., of Brockport, Monroe Co., N. Y., are manufacturing the best Wheat or Grain Drill in the known world, and at the lowest price. Every useful agricultural implement should be afforded at a rate that places it within the reach of every farmer.

To accomplish this, the subscribers have made an arrangement with the inventor, to manufacture on a large scale for the coming season,

PALMER'S WHEAT DRILL.

An article combining all the advantages of every other grain drill or planter, in a simple substantial form.

Confiding in the prospect of *Large Sales*, they have determined on selling them at *a very low profit*, making the price of the drill at least *twenty-five dollars cheaper* than any other, capable of performing as much.

☞ We challenge the world to produce a drill equal to it. ☜

They are made of first rate materials, and in a strong, workmanlike manner, and finished in superior style. Each drill is WARRANTED.

Orders addressed to J. A. HOLMES & CO., Brockport, N. Y., will meet with prompt attention Orders should be sent in or delivered to our authorised agents as early as the month of July, to secure a machine this year.

Brockport, May 1, 1849.—2t. J. A. HOLMES & CO.

Morgan Horse Black-Hawk.

THIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms $15 the season, payable in cash, or a satisfactory note on demand with interest. For particulars in regard to pedigree and performances, see large bills, and previous volumes of *The Cultivator*. D. & D. E. HILL.

Bridport, Vt., May 1, 1849.—3t.

The old Morgan [illegible],

THE highest blooded Morgan Stallion now remaining, will stand this season at the stable of F. A. Wier, in Walpole, N. H.

Terms $25, $5 of which to be paid at the time of service, and the remaining $20 if the mare proves in foal.

Pasturage furnished as usual.

FRED. A. WIER, Agent for the Proprietors.

March 1, 1849.—5t.*

The Genuine Morgan Horse

GENERAL GIFFORD, will stand the ensuing season, on Mondays and Tuesdays, at the stable of Geo. A. Mason, 2½ miles north-east of Jordan; Wednesdays, Thursdays and Fridays at the stable of D. A. Munro, in Camillus; on Saturdays, at the stable of John C. Munro, in Bellisle.

Terms, $10 to insure. Mares that are not placed directly in charge of the subscribers, must be regularly returned through the season. All persons parting with mares before the usual time of foaling, will be held for the $10. Pasturage furnished by either of the subscribers, at 3 shillings per week. Accidents and escapes at the risk of the owners.

We can confidently assert that in size, build and style of action, General Gifford more nearly resembles the original Morgan Horse than any other stallion, except his sire, the Gifford Morgan.

The Morgans, as a breed, are so universally known and esteemed, that we deem it unnecessary to repeat their merits.

General Gifford was got by the Gifford Morgan, his dam a Morgan mare. A full description of the origin of the Morgans, and the pedigree of Gifford Morgan, may be found in the Cultivator for 1846, p. 19 MUNRO & MASON.

April 1, 1849-3t.

Morse's Grey.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Spiegletown, three miles north of the village of Lansingburgh. He is a beautiful dapple grey, 15¾ hands high, strongly and finely proportioned; has trotted his mile in 2 minutes and 50 seconds; is a square trotter, and combines first-rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper, are eagerly sought after in the market, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the extraordinary prices they command, render him by far the most profitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner, Mr. Calvin Morse.

Terms, $10 the season. Insurance to be agreed upon.

Communications addressed I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

May 1, 1849.—3t.

The Imported Horse Consternation

WAS bred by Mathew Hornsey, Esq., of Stitenham, Yorkshire, England, in the year 1841. He was imported by C. T. Abbot, Esq., in the year 1845. He is now owned by J. B. Burnet, Esq., of Syracuse, N. Y., and will serve a limited number of mares the ensuing season, at his own stables, near the village of Geddes, two miles west of Syracuse. The very best pastures, with plenty of water and the most secure fences, will be provided for mares sent from a distance, at two shillings and six pence a week. No mare taken except at the risk of the owner.

Consternation is of a beautiful, unfading dapple brown color—stands 15 hands and 3 inches high, and is remarkable for vigor of constitution, uncommon development of bone and muscle, and an intelligent kind docile position He is compact and short-legged, yet of a rangey and majestic figure. His chest and flank are remarkably full and deep. His action is easy and graceful, yet proud and commanding.

But what is more important perhaps than either, he is entirely thorough-bred. There is no taint of mongrel stock in his long line of ancestry. Indeed there is no horse living, with a more distinguished or genuine pedigree.

His ancestors were of unusual size and strength, and every one of them of good disposition and free from blemishes. His pedigree is briefly as follows, viz:

By Confederate—dam Curiosity, by Figaro—her dam by Waxy; Confederate was bred by Earl Fitz William, got by Comus—by Cervantes, by Sir Peter, by High Flyer, by King Herod, by Flying Childers. Figaro was got by Hap Hazard, by Sir Peter, out of Mrs. Harvey, by English Eclipse, &c., &c., &c.

This pedigree is in every particular true and genuine, and can be abundantly established by reference to certificates and volumes of the Stud Book in the possession of the subscriber.

As to the character of Consternation's stock, reference is offered to Ira Hitchcock, Oneida Castle; Henry Rhodes, Trenton; A. Ford or John Best, Rome, and to farmers generally in that vicinity.

Terms $5 in advance, and $5 additional if the mare is got in foal. April 1.—3t. J. B. BURNET.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

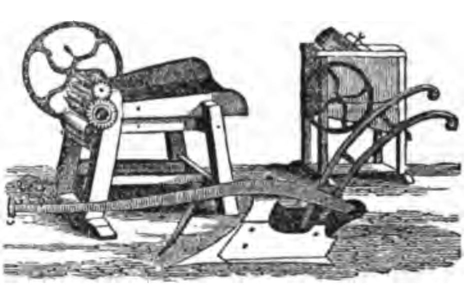
37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1, 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

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Wheeler's Patent Horse Power and Threshing Machines.

HAVING increased facilities for the manufacturing of the above Machines in this city, the public can be supplied with them at short notice, at wholesale and retail.

To those farmers who wish the machines to sell, and will put them running in their vicinities, a fair discount will be allowed.

For terms, and conditions of sale, and warranty, see the Albany Cultivator, Genesee Farmer, Prairie Farmer, and American Agriculturist; also, catalogues and circulars of the Albany Agricultural Warehouse and Seed Store.

These machines are acknowledged superior by all who have used them, and having been extensively used since 1841, are known to be durable—and are much improved in several respects.

The cost of threshing with these machines, has been variously estimated at from one-half to one-third that with the ordinary sweep powers.

Annexed is a statement of expenses of operating a two horse machine, compared with the ordinary kind—as given by an extensive farmer in Illinois, the past season:

Five men in threshing time to thresh and clean, averaging 200 bushels per day for market,	$5 00
Two horses,	1 00
Boarding 5 men and two horses, at 3s.,	2 63
	$8 63

Amounting to a little over 4½ cts. per bushel—while he was enabled at all times to take advantages of prices, seasons, &c., and to do his work without being dependant upon others for labor or machines.

While his expenses, when he hired machines were never less than the following:

For threshing 250 bushels per day, at 5 cents,	$12 50
Furnishing four horses of six, (2 belonging to machine,)	2 00
Six men, (beside two with machine,)	6 00
Boarding all hands and horses,	5 25
	$25 75

Amounting to about 10½ cents per bushel. And if to this be added the average loss by imperfect threshing and separation of grain from straw, more than with Wheeler's Thresher and Separator of not less than five per cent of grain at one dollar per bushel, would amount to nearly 15½ cents per bushel, or more than three times the expense with Wheeler's machine. To say nothing of the delays and losses consequent upon depending upon others, &c.

The foregoing is but a fair statement of the expenses of the majority of grain-growing farmers for threshing; and where labor and grain are valuable, these savings are well worth counting.

All orders and communications are solicited, and will receive prompt attention.

HORACE L. EMERY.
June 1. No. 369 & 371 Broadway, Albany, N. Y.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE FOURTH VOLUME OF THE HORTICULTURIST commences on the first of July, 1849.

The Publisher, at the close of the third volume, desires to return thanks for the patronage bestowed on this work. It has already attained a circulation equal to that of any similar magazine in Europe, and far beyond any of its class hitherto attempted in America. Its influence on the progress of Gardening, and the information in matters of Rural Taste, is already strikingly apparent. Its extended and valuable correspondence, presents the experience of a large body of the most intelligent cultivators in America; and the instructive and agreeable articles from the pen of the Editor, make it equally sought after by even the general reader, interested in country life.

The work is published monthly, in 8vo. form of 48 pages—each number accompanied by a frontispiece and several other engravings. The list of constant contributors embraces our first horticulturists and practical cultivators. The "FOREIGN NOTICES" present a summary of all the leading horticultural Journals of Europe; the "DOMESTIC NOTICES," and "ANSWERS TO CORRESPONDENTS," furnish copious hints to the novice in practical culture; and the numerous and beautiful illustrations—Plans for Cottages, Green-Houses, the Figures of New Fruits, shrubs and plants, combine to render this one of the cheapest and most valuable works to country gentlemen on either side of the Atlantic.

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Kinderhook Wool Depot.

THE success of this enterprize, and the steady increase of business during the past 4 years, has induced the subscriber to associate with him Mr. Thomas M. Burt, as a partner in the business. The integrity and correct business habits of this gentleman, are well known to many prominent men throughout the State; and for more particular information, reference may be made to R. H. King, Esq., or John T. Norton, Esq., of Albany.

With increased facilities for extending their business, the enterprise will be conducted on the same principles as heretofore:

1. The FLEECES will be thrown into *sorts* according to *style* and *quality*.
2. A discrimination will be made between wool in good or bad condition.
3. All who desire it can have their clips kept separate.
4. Sales will be made invariably for cash.
5. The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25 cents on $100 for a term of three months.
6. Liberal advances made in cash, on the usual terms.

Wool forwarded from the West and North, should be marked H. B. & Co., Kinderhook, N. Y., with the initials of the owner's name on each sack, and shipped to East Albany.

Kinderhook, May 18, 1849. H. BLANCHARD.

After the 1st of June, the business will be conducted under the name and firm of H. BLANCHARD & Co.

Reference may be had to,
Dr. J. P. Beekman, Kinderhook, N. Y.
Benj. P. Johnson, Albany, "
L. A. Morrell, Lake Ridge, "
D. S. Curtis, Canaan, "
C. W. Hull, New-Lebanon, "
J. Murdock, Wheatland, "
C. W. Richmond, Aurora, "
Nathaniel Sawyer, Cincinnati, O.
M. D. Wellman & Co., Massillon, O.
Freeland, Stuart & Co., New-York City.
R. Carter, Chicago, Illinois.

THE CULTIVATOR
Is published on the first of each month, at Albany, N. Y., by
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan. No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

☞ The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:

NEW-YORK—M. H. NEWMAN & Co., 199 Broadway.
BOSTON—J. BRECK & Co., 52 North Market-st., and E. WIGHT, 7 Congress-st
PHILADELPHIA—G. B. ZIEBER.

ADVERTISEMENTS—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from these terms.

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, JULY, 1849. VOL. VI.—No. 7.

Improvement of the Soil.

Improvement of Old Lands by Green Manuring.

EDITORS OF THE CULTIVATOR—Eight years ago, I tried the experiment of renovating a worn-out pasture-field by Green-Manuring, or, the plowing in of Green Crops. The highly satisfactory results of this experiment, and the general subject of improvements by this system of manuring, were so freshly brought to mind yesterday, in strolling over my field, that I now give you my experience, together with a brief collection of facts and principles touching the matter, from other sources.

The field which I experimented upon contains four acres; it is a light, thin, sandy loam, and is situated upon a high swell, over a mile from the barn, and difficult of access with a manure cart. It had been exhausted of all fertility by successive and injudicious croppings with rye, before it came under my management. A thin herbage, of little or no value, would show itself in the spring, only to be followed by a brown and most arid appearance at mid-summer. For two or three years, I occasionally passed over this land, thinking that the next season should witness some exploit for its renovation; but the great difficulty that continually presented itself to my mind, was, how to commence an improvement where there was no possibility of carting on any fertilizing substance, at a reasonable expense. I finally decided upon the following course:

In the latter part of June, when the little vegetation which the land produced was at its greatest height, it was nicely turned under, and the field rolled. I was quite sure, to start with, that the usual depth of plowing, namely, three to four inches, by which the skinning process is made finally complete, or receives its full finish, had been the practice here; and I therefore put the plow in to the depth of six inches, in order to expose a surface that had never before seen the day, which was thought to be of better quality than the first four inches. At any rate, it could not be poorer. Three pecks of buckwheat to the acre, were sown upon the rolled surface, and harrowed in. The crop was permitted to ripen, and gave an average yield of eight bushels per acre. As I had laid a plan of operations which were to extend through more than one season, and as I wished to test the merits of green manuring, I concluded to take off whatever of a scanty crop the land would naturally produce, in order to compare it with another crop, to be harvested at the end of the course. Otherwise, I should not have taxed this poor old pasture with a grain-crop, at all.

In May following, one bushel of buckwheat was sown on each acre, and when the crop had attained its blossom, it was turned under. A heavy chain, with one end attached to the plow-beam, immediately forward of the mould-board, and the other to the off-end of the evener, lopped down the tender buckwheat stalks, so that the plow covered them up pretty well. The field was then rolled; the same quantity of buckwheat again sown, and the crop managed precisely like the preceding one. Late in September, one and a-half bushel of winter rye was sown to the acre. The following spring, the rye presented a remarkable appearance. It stood so thick and heavy upon the ground that it required some resolution to plow it under, especially when all outsiders were pronouncing it an improvident and injudicious procedure. The rye was turned under. On the 20th of June, one bushel of buckwheat was again sown on each acre, together with grass seeds. It is risky sowing grass-seed at such a season of the year; but it was wet weather at the time, and we had a sufficient succession of showers through the summer to insure a good 'catch' of grass. This crop ripened, and gave an average yield of 18 bushels per acre,—being an increase of over 100 per cent. over the first crop. It is entirely safe to say, that one-half an acre has produced more value in feed since, than the four acres did previous to plowing in the green crops. I shall never be at a loss to know what to do with similar fields hereafter.

A number of interesting communications upon the subject of green crops for manure, have been published in our Agricultural Journals. With your permission, I will cite the following interesting facts from two of them:

In the 9th vol., *N. E. Farmer*, W. Buckminster, Esq., of Framingham, Mass., states that in May, 1828, he plowed up three and a-half acres of poor pasture. It had been so reduced by a former owner, that 10 acres did not afford sufficient pasturage for one cow through the season. Immediately after plowing, a bushel of buckwheat to the acre was sown, and in six weeks, the crop was rolled down in the direction he intended to plow, and then turned under, and the field sowed as before. In the latter part of August, the second crop was served like the first, and the land then seeded to clover, herds-grass and red-top. The next season, the field was mowed, and although the grass was considerably winter-killed, it yielded a ton of hay to the acre. The field was afterwards pastured; and he never had any pasture-ground yield so well before. He thought the green crops improved the land as much as a good dressing of manure.

In the 12th vol., *N. E. Farmer*, John Keely, of Haverill, Mass., gives an account of remarkable crops of rye, which he had raised by the use of green crops for fertilising the soil. The land on which the experiments were made, is situated on the Merrimack river; the soil a sand, approaching to loam as it recedes from the river. It is altogether too light for grass. The crops found most profitable to raise on it, were winter rye, and Indian corn;—the crops of rye ordinarily yielding 8 to 12 bushels, and of corn, 13 to 80 bushels, to the acre.

The land on which he raised a premium crop of rye, in the season of 1832, had, for three or four years previous, been planted to corn; and owing to the extent of his tillage land, had not received more than four or five loads of manure to the acre, each season. The weed commonly called charlick, (charlock ?)—which very much infested the land,—was suffered to attain a rank growth in the spring of 1831, and about the 20th of June it was plowed in. Another crop sprung up and covered the ground, and in August, that was plowed in also. A third crop soon appeared, which, in the latter part of September, was served like the others. At this time the rye was sown in the usual manner, namely, a narrow strip of land was plowed, the seed sown immediately upon the furrows, and harrowed in, and so on, until the whole was completed. Sowing the seed immediately after the plow, was considered very advantageous to the crop. The soil then being moist, caused the seed to spring immediately, and gave a forwardness and vigor to the plants, which they ever after maintained. The next year, 1832, the rye was harvested at the usual season. The land contained one acre and thirteen rods, and yielded forty-six bushels and three pecks. A field of four acres, similarly managed in 1828, gave 33¼ bushels of rye to the acre.

Mr. Keely remarked that experience and close observation upon the management of green crops, had convinced him that three things, among others that might be more obvious, were essential to a successful result: First, the absolute necessity that the plow used be of good construction: Second, that some method be devised to prostrate the crop before the plow, or it would not be covered:—He used a wooden roller, about four inches in diameter, and sixteen inches long, fixed on the end of the plow beam, in a frame temporarily put on for the purpose.—Third, it had been found necessary to plow the land soon after a rain,—this was very light, sandy land,—while it is moist, or the plow would crowd the furrow, instead of turning it handsomely. He also considered it advantageous to roll the land, after each plowing.

The principles by which lands are improved by turning in green crops, are clearly set forth by Prof. Johnston, in his usually happy way. I cannot resist an inclination to quote briefly from his lectures:—

"The plowing in of green vegetables on the spot where they have grown, may be followed as a method of manuring and enriching *all* land—where other manures are less abundant. Growing plants bring up from beneath, as far as their roots extend, those substances which are useful to vegetation—and retain them in their leaves and stems. By plowing in the whole plant, we restore to the surface what had previously sunk to a greater or less depth, and thus make it more fertile than it was before the green crop was sown.

"This manuring is performed with the least loss by the use of vegetables in the green state. By allowing them to decay in the open air, there is a loss both of organic and of inorganic matter—if they be converted into fermented (farm-yard) manure, there is a large loss, and the same is the case if they are employed in feeding stock,* with a view to their conversion into manure. *In no other form can the same crop convey to the soil an equal amount of enriching matter as in that of green leaves and stems.* Where the *first* object, therefore, in the farmer's practice is, so to use his crops as to enrich his land—he will soonest effect it by plowing them in in the green state.

"But it is deserving of separate consideration, that green manuring is especially adapted for improving and enriching soils which are poor in vegetable matter. The principles on which living plants draw a part—sometimes a large part—of their sustenance from the air, have been discussed, and I may presume that you sufficiently understand the principles, and admit the fact. Living plants, then, contain in their substance not only all they have drawn up from the soil, but also a great part of what they have drawn from the air. Plow in these living plants, and you necessarily add to the soil more than was taken from it—in other words, you make it richer in *organic* matter. Repeat the process with a second crop, and it becomes richer still—and it would be difficult to define the limit beyond which the process could no further be carried."

I would never depend upon green manuring alone, on land that I intended to tax with grain crops. In such a case, some additional saline substances would need to be added, which this system of manuring could not supply, in order to support those crops and maintain the fertility of the soil. The possession of light and poor, sandy or gravelly lands, is usually attended with limited means for making or *purchasing* manure; and these soils are always materially deficient in vegetable matter. It has therefore been my impression, for years, that, were I to become the owner of such a farm, I should use green crops extensively, in connection with other manuring, to invigorate my poor soil, and supply it speedily with this essential material—vegetable matter.

In the case of worn and exhausted pastures,—such as the one I have described,—which are level enough to plow, and where a good portion of the droppings of the cattle remain on the land, a resort to green manuring will doubtless increase and perpetuate their fertility. In my immediate vicinity, pasturage is worth from 45 to 50 cents a week for each cow. If my pasture ranges were five or ten times larger than they are, I could readily obtain these prices. With me then, a considerable outlay for increasing the productiveness of these lands is judicious. In other sections, where the various conditions I have named are all right, I would confidently recommend the practice of turning in green crops, as a cheap, effectual and speedy method for increasing the productiveness and profit of worn-out pastures. F. HOLBROOK. *Brattleboro', Vt., May, 1849.*

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* The manure voided by an animal contains very much less solid matter than the food it has consumed. For every 100 lbs. of dry fodder, the horse or the cow will give on an average, 46 lbs. of *dry* manure. Lec. 18, Sec. 13.

Action of Lime.

Chemical investigation has led to the idea that one of the effects of lime, when applied to the soil, consists in its rendering soluble certain mineral substances which are essential to the growth and perfection of vegetation. Granite, trap, and slate contain potash, which is liberated by caustic lime. There is good reason to believe that this action of lime is of great importance, and that in many instances, it is one of the principal causes of the increased productiveness, which the application of this substance imparts to the soil. The following remarks, from a valuable paper by Prof. JOHNSTON, serve eminently to illustrate this subject, and will be read with profit.—EDS.

The decaying vegetable matter in the stems, roots, and leaves of plants, which form the so-called humus of the soil, contain a large proportion of the inorganic matter which was necessary to their existence in the living state. As they decompose, this inorganic matter is liberated. By promoting this decomposion, therefore, lime sets free this mineral matter, and provides at once abundant organic and inorganic food to the growing plant. The result of the action of lime is no less important in reference to its fertilising quality than that by which it causes the production of those numerous changes in the purely organic matter of the soil to which I have already adverted.

If the vegetable matter decay rapidly, it will supply in abundance all the materials, both organic and inorganic, which new races of plants require to form their entire substance. If it be in an inert state, or decompose slowly, the food it contains remains locked up and comparatively useless to vegetation. In quickening the decay of this inert or slowly decomposing matter, it is easy to see, therefore, how lime should render the land more fertile, and should do so more sensibly where vegetable matter is more abundant.

The mineral and rocky fragments in the soil are acted upon in a similar manner.

Among the earthy constituents of soils, there often exists fragments of feldspar and other minerals, derived from the granitic and trap rocks, as well as portions of the slaty and other beds from which the soils have been formed, and which, as they crumble down, yield more and more of those inorganic substances on which plants live.

The decomposition of these minerals and rocks proceed more or less rapidly under the conjoined action of the oxygen, the carbonic acid and the moisture of the atmosphere. But the presence of lime promotes this decomposition, and the consequent liberation of the inorganic substances which the rocks contain.

The silicates of potash and soda are among the most important compounds which these minerals and rocky fragments contain. These silicates, after being heated to redness with quick-lime, readily yield a portion of their potash or soda to water poured upon the mixture. The same result follows, but more slowly, when without being heated, the silicates and the lime are mixed together into a paste with water, and left for a length of time at the ordinary temperature of the atmosphere. It is reasonable, therefore, to suppose that, in the soil of our fields, a similar decomposition will slowly take place when quick lime is mixed with it. It will take place, also, though still more slowly, when lime is added to it in the form of carbonate.

By some, the liberation of potash and soda in this way is supposed to be the most important action exercised by lime in rendering the land more productive. With this extreme opinion I do not agree, though it must be conceded, I think, that in numerous instances a certain amount of benefit must follow from the chemical action it is thus fitted to exercise.

I have spoken of lime as liberating the inorganic constituents of the decaying vegetable matter of the soil. The stalks of the grasses, and the straw of our corn-bearing plants also contain silicates of potash and soda, which lime sets free in hastening the decomposition of the vegetable matter of which they form a part. Besides liberating, it further decomposes these silicates, as it does those of the minerals in the soil, and sets their potash and soda free to perform those important functions they are known to exercise in reference to the growth of plants. I am inclined to consider this part of the action of lime as of nearly equal importance to vegetation in many instances, with that which it exercises upon the mineral silicates.

While the potash or soda is set free in a soluble state, the lime unites with a portion of silica, forming a silicate of lime of which traces are to be met with in nearly all soils. This silicate, again, is slowly decomposed by the agency of the carbonic acid of the atmosphere and of the soil, as I have already explained when speaking of this compound as one of the causes of the known fertility of soils formed from the decay of trap rocks.

Potash and soda exist sometimes in considerable quantity, in our stiff clay soils, in combination with the silica and alumina, of which they chiefly consist. From their extreme tenacity, the air is in a great measure excluded from these soils, and hence chemical decomposition proceeds in them very slowly. The addition of lime alters their physical character, and, by making them more open, admits the air, and thus promotes its decomposing action upon them. But it acts chemically also, in the same way as it does upon the silicates already spoken of, and thus compels them to give up more freely to the roots of plants those mineral substances by which their growth is to be made more luxuriant.

ACTION OF LIME ON SALTS OF IRON, MAGNESIA AND ALUMINA.—*Salts of Iron.*—Lime, either in the mild or in the caustic state, possesses the property of decomposing the sulphate and other saline compounds of iron, which especially abound in moorish and peaty soils, and in many localities so saturate the subsoil, as to make it destructive to the roots of plants. Sprengel mentions a case in which the first year's clover always grew well, while in the second year it always died away. This, upon examination, was found to be owing to the ferruginous nature of the subsoil, which caused the death of the plants as soon as the roots began to enter into it.

When land is rendered unproductive by the presence of salts of iron, a dressing with lime will bring the land into a wholesome state without other aid than those of the drain and the subsoil plow. If sulphate of iron be the cause of the evil. the lime will combine with the acid and form gypsum, (sulphate of lime,) while the *first* oxide of iron which is set free will, by exposure to the air, be converted into the *second* or red oxide, in which state this metal is no longer hurtful to vegetation.

The drain and the subsoil plow are useful auxiliaries to the lime in lessening the injurious effects of the compounds of iron, because they allow the rains to descend and gradually to wash away the noxious matter which has accumulated in the under soil—because they permit the descending water to carry with it portions of the lime in a state of solution, and thus to spread its good effects through the whole soil—and because they admit successive supplies of air as deep as the bottom of the drains, by which, while the action of the lime is promoted, those other good effects also are produced which the oxygen of the atmosphere can alone accomplish. In fact, unless an outlet for the surface water be thus provided beneath, by which the lime may be enabled to descend, and the rains to wash away slowly the noxious substances from the subsoil, even the addition of a copious dose of lime will only produce a temporary improvement.

Salts of magnesia and alumina.—Lime decomposes also the sulphates of magnesia and alumina, both of which, but especially the former, are occasionally found in the soil in too large proportions, and, being very soluble salts, are liable to be taken up by the roots in such quantity as to be hurtful to growing plants. With the sulphuric acid of these salts the lime forms gypsum, as it does with the acid of sulphate of iron when this salt is present in a soil to which it is added: besides removing the evil effects of these very soluble sulphates, therefore, it exercises the beneficial action which gypsum is known to exhibit upon many of our cultivated crops.

Alumina has the property of combining readily with many vegetable acids, and in the clay soils exercises a constant influence—though more feeble in degree than that of lime—in persuading organic matter to those forms of decay in which acid compounds are more abundantly produced. Hence, clay soils almost always contain a portion of alumina in combination with organic matter. These organic compounds are decomposed by lime, and, by the more energetic action of this substance, their constituents are sooner made available to the wants of the new races of plants.

Charcoal and Peat.

Whatever opinions may have been formed in relation to plants supplying themselves sufficiently with carbon and nitrogen from the atmosphere, we think careful observation has shown that the application of carbonaceous and ammoniacal substances is beneficial to the growth of plants; and to this conclusion we believe the public mind will come at last. It is admitted by all, that plants feed on carbon and nitrogen; and why should we not supply them with their appropriate food?

Indeed, it is but a few years since the virtues of charcoal as a manure, and as a medium of *catching* ammonia, were much vaunted by some of those who now consider it of little or no value; they even went so far as to declare, that it was, of all others, "the cheapest and best manure" for this country.

Although the writer of this never indulged a belief in the wonderful properties of charcoal, as put forth by some enthusiastic and sanguine theorists, he has never doubted its actual value. He was convinced of this before he had ever seen any theory on the subject derived from chemical investigation. He had seen the effects of the substance on different crops; he had seen the yield of Indian corn increased ten bushels to the acre, simply by putting a shovel-full of coal dust from the beds of coal-pits, in each hill. He had seen a similar effect from its use on potatoes; the difference in both crops, between the charcoal dust and nothing, could be seen to a row or a hill, during the whole period of growth. Effects equally marked, were seen from the spreading of coal dust on moist grass land; the application of about three hundred bushels to the acre, having increased the quantity fifty per cent., and greatly improved its quality. The beds of old coal pits, which had been made more than twenty years, were found to produce a sward so much thicker and luxuriant than the surrounding ground, as to attract attention at a considerable distance, and the herbage was so much sweeter that these spots were more closely grazed by stock. The same superiority of these spots over the rest of the field, was seen when the land was plowed and put to any kind of grain; the straw was brighter, thicker on the ground, and the grain generally heavier.

But it may be said that the good effects in the cases above cited, were owing to the ashes or alkalies, produced in burning the coal, and the action of heat on the earth. To this it may be replied that spots of ground where heaps of wood had been burned and the ashes spread around, soon ceased to produce crops of extra yield; and while those on which coal dust had been spread, produced rich harvests, the former were covered with moss.

Nearly the same effects have been produced by the use of fine charcoal, from iron works and other places where quantities of coal had been gathered.

It is proper to say that the greatest benefits we have seen from the use of charcoal, have generally been on rather moist land. On very dry soils, we have seldom seen so favorable effects, except in moist seasons. Considerable moisture is evidently necessary to reduce the coal to a soluble state.

Some have supposed that charcoal acted wholly as an absorbent of ammonia. We are far from denying its effect in this particular, though we see no reason to believe that this is its only use as a manure. We do not see why it may not, as well as other carbonaceous matters, furnish carbonic acid to plants. Its decomposition is slow; but under the action of air and moisture it gradually wastes away; it is *dissolved*, and chemists assure us that charcoal, dissolved and combined with oxygen, forms carbonic acid, which plants are known to feed upon.

Peat or "muck" is similar in composition to charcoal, but is more easily decomposed. When muck is applied to the soil, it is evidently dissipated with every crop that is taken, and finally disappears entirely. It is so with charcoal, only the decay is slower.

The expediency of using charcoal as a fertilizer, must of course, depend on circumstances. Like other valuable substances, it may be "bought too dear;" and its cost in many situations is probably too great to admit of its profitable use as an ordinary manure. But charcoal *waste* may frequently be had at a cheap rate; and peat, which we have before remarked, is similar in composition, is abundant and cheap in many situations.

These substances are the best the farmer can use in his yards or stables for the absorption of urine, and the liquids of the manure heap, or for preventing the escape of gases. They hold the fertilizing principles with sufficient tenacity to prevent their loss by evaporation, but yield them, under the action of heat and moisture, to the wants of growing plants.

Peat has, in some instances been charred, and in that form used as a manure with advantage. Further experiments are needed, however, to show its comparative effects in this form. It can be charred without any additional expense for fuel; the peat itself, being once ignited, will burn to any degree that is required. The peat should be first partially dried then a fire may be kindled, and the lumps of peat gradually placed round. When the fire is fairly started, it should be kept in a smothered state; because an open blazing fire will reduce the peat to ashes, without forming charcoal. Two hundred to three hundred bushels of charred peat per acre, have been found to produce effects equal to a copious dressing of animal manure. The acid of the peat is dissipated by this process,—it is reduced to a pulverised state, and benefits vegetation immediately.

Management of Grass Land.

The improvement of grass land, has not generally received that attention in this country, which the importance of this department of husbandry seems to demand. Throughout the northern states, the grass crop, in hay and pasturage, is of greater value than any other. With the exception of swine, grass constitutes the principal food of our domestic stock. It chiefly feeds our laboring animals, and is the "raw material" from which is produced most of our beef, mutton, butter, cheese and wool; and by thus supporting the live stock of our farms, furnishes in an essential degree, the elements for the production of our breadstuffs, fruits and vegetables.

In those parts of our country where dairying and stock raising constitute the leading branches of farming, it is important to continue the production of grass on the same land as long as good crops can be obtained. In many situations, the product may be kept up for many years, with no diminution, without breaking the sod with the plow. Such is particularly the case with lands which are annually flooded, and it is so to a greater or less extent, with all rich, moist lands. The first requisite is, that the ground be properly prepared and well seeded. If intended for mowing, the surface should be made smooth. Wet places, and those where the grass would be likely to "winter-kill," should be underdrained. For *permanent* meadows, it is not advisable to sow much red clover; it dies out and leaves vacancies in the sward, which afford beds for the growth of weeds. The best grasses for the purpose under consideration, are timothy, (herds-grass of New England,) and red-top, with a little white clover—unless there is plenty of the latter in the soil. The quantity of seed to the acre, if the land is moist, may be ten quarts timothy, one bushel red-top, and two quarts of white clover. The different seeds may be mixed and sown together, slightly brushing or harrowing them in.

The time of seeding may be varied, according to circumstances. If the ground is in good order, the grass may be sown in the spring with some kind of grain; if it is in a rough state, the seeding may be postponed till August or September, which will give the best of the season to work it and bring it into suitable condition. When the ground has become well swarded, the great object will be to keep it so. Attention should be given that it does not become so closely bound as to choke the growth of the grasses; and if spots die out, from any cause, they should be immediately re-seeded. A light sharp harrow, drawn over the field in spring, after the ground has settled, will prevent binding. If the grasses seem to be generally on the decline, it will be best to give the sward a thorough harrowing, immediately after mowing, and sow seed, more or less, according to the condition of the old grass, applying at the same time, a dressing of fine compost. Brush in the seed and mix it with the manure with a brush harrow, and pass a roller over it. Top-dressings of this kind will be useful, and should be applied whenever the crop begins to depreciate.

Another mode of renewing meadows has been considerably practiced in Massachusetts and other New England states, for the last twenty years, and is much approved where it is wished to keep the land constantly in grass, with no other crop intervening. The land is plowed soon after the hay is taken off, and immediately re-seeded. The furrows are turned *flat*, in order to keep the surface as level and smooth as possible. The furrows are first rolled and then harrowed with a very light harrow, so as not to disturb the inverted grass—the roller and harrow being passed lengthwise of the furrows, only. Manure, in such quantities as the farmer can spare, is spread on the ground at the time of sowing the seed. It is not considered expedient to plow very deep, for this purpose; the new grass forms a good sward sooner, where the furrow is not more than five or six inches, than where it is of a greater depth. No grain is sown with the grass seed. If the autumn is moist, the young grass will make sufficient growth to stand the winter, and will give a good crop the next season, though it will be later than ordinary grass.

Many farmers who have had experience in sowing grass seed at various seasons of the year, prefer the latter part of summer or the first of autumn. Grass sown in spring, with grain, is often overpowered and kept feeble. It is choked and deprived of moisture by the stronger growth of the grain; and if the weather is dry and hot at the time the grain is harvested, a large portion of the grass is sure to be killed, which leaves the ground to be occupied by weeds. On the other hand, late-sown grass escapes the drouth of the first season, and by having the benefit of the autumnal rains, becomes well set before winter shuts up the ground.

The time of mowing has much to do with the vigor of the sward and the amount of the crop. If the grass is suffered to run to seed, it exhausts the energy and life of the roots, much more than if it was cut at an earlier stage. The deterioration of the soil is also greater in all cases where plants are allowed to form seed. The question has been much discussed, whether mowing-grounds should be grazed by any kind of stock. The writer's observation leads to the belief that this depends much on the condition of the land and the kind of animals placed on it. Cattle and horses may do great injury to grass land, when it is wet or so soft that the sward is broken and the soil poached by the hoof. Sheep are less liable to do damage in this way; though they, as well as other stock, may be kept so close that they will gnaw the grass to the roots, rendering it liable to be killed by frost or drouth; but if the land is only moderately fed, while it is dry and comparatively solid, we do not think the crops of succeeding years are lessened in consequence.

But it is argued that the aftermath should be left on the ground as a manure. The question is, simply, whether this grass is worth more for the purpose of fattening animals, or making butter and cheese, &c., than it is for manure in its crude state; or whether it may not be better economy to use the grass for these purposes, and manure the land in some other way. The course of the farmer must be determined by the particular circumstances in which he is placed; such as the comparative value of the products named, and the facilities he has for manuring his land. An experiment, however, will convince him that a dressing of manure, though it be only slight, will produce striking effects compared with the decay of any common crop of aftermath.

PASTURES.—In most sections, it is common for land to remain for many years in pasturage. In hilly and mountainous districts, particularly, there are lands that have been thus in grass ever since they were first cleared from the forest—a period extending in some instances in this country, to two hundred years, and in Europe, some lands have been in this situation from time immemorial. Under proper management, the herbage does not deteriorate either in quantity or quality. In this respect, grass seems to form an exception to most crops, which require to be managed on the principle of rotation.

In many situations, little or no attention is paid to the improvement of pastures; a fact which may well excite surprise when we consider the important relation they sustain in the general economy of the farm. We know of no reason why a judicious expenditure of money on this part of the farm, may not yield as profitable returns, as the same amount laid out on any other portion. The chief improvements required on pastures, are draining, the eradication of bushes and useless plants, and bringing the land into proper grasses. Drainage is, perhaps, generally most necessary. The watery and sour nature of herbage consequent on too much wetness of the soil, is not only unpalatable and innutritious, but absolutely unwholesome, tending to produce diseases of the liver both in cattle and sheep.

Drains may be made at any season of the year, (except when the ground is frozen,) as best suits the convenience of the farmer. Bushes can be destroyed most easily towards the latter part of summer. The "old of the moon in August," has long been considered the best season for performing this business. Without admitting any special lunar influence in the case, we believe experience has established the fact that bushes are more effectually killed when cut at this period, than at any other. Alders and other shrubs that grow on stools or hillocks, raised above the general surface, may be torn out by the roots and effectually exterminated. Two men, and two to four strong oxen, with a root-puller, (such as has been several times described in our columns,) will clear them out rapidly. Briars and small shrubs should be cut close to the ground, and if they sprout, the operation should be repeated the next season, which, if the work is well done, will be pretty sure to destroy them. Sheep and cattle will kill many of the young sprouts by cropping them. The bushes should be burned, if thick on the ground, the ground well harrowed, and grass seed sown.

If ground is intended for permanent pasture, we think it is not necessary, or advisable, to plow it. The condition of the soil when the forest is first cleared off, is favorable to the growth of grass. The vegetable matter on the surface can be sufficiently mixed with the soil with the harrow, and the grasses *take* more readily and are less liable to die out, than if the soil was reversed by the plow.

GRASSES FOR PASTURES.—If we examine the sward of our best pastures, we shall generally find it to consist of several kinds of grasses and plants. The advantage of this mixture is two-fold; the ground is made to support a greater crop of herbage, and the thrift of stock is generally promoted by it. Animals when left to themselves, choose plants of different kinds, and we cannot doubt that nature prompts them to that course most conducive to their health.

It is a common remark with grazing farmers, and dairymen, that stock does best, and the best butter is made on the "natural grasses," meaning such plants as come into the soil without being sown. These are generally, the "June grass," or Kentucky blue grass, (*Poa pratensis*,) and white clover. (*Trifolium repens*.) Whether either of these is really indigenous to the country, we are unable to determine; but both are very *natural* to all our moist rich grounds. The first is one of the best pasture grasses we have, especially for rich soils. It starts early in spring, and grows late in the fall. It makes a mass of rich leaves, which being but little injured by frost, may lie on the ground through the winter, and afford good support for stock whenever there is no snow, and may even be fed off the next spring, before a new growth starts. It constitutes the principal herbage of most of our best pastures. The fame of the blue-grass pastures of Kentucky, is wide-spread, and they are formed chiefly of this species. But as, for the reason before given, it is desirable to have a mixture, and as the blue-grass does not make so much growth during the drouth of summer, it is well to have with it some timothy, (*Phleum pratense*,) red top, (*Agrostis vulgaris*,) and white clover. The timothy and red-top start later than the blue-grass, and do not stand the frost so well, but will make more growth in the middle of the season; and the white clover will fill up all the interstices, making a close sward. On deep loamy soils, orchard-grass, (*Dactylis glomerata*,) may be substituted for timothy and red-top. It is a strong-growing grass in such situations, and makes an abundance of leaves which are well relished by cattle and horses.

In forming pastures, the following kinds and quantities of seed may be used for an acre:

Kentucky blue-grass,............	16	quarts.
Timothy,........................	4	do
Red-top,........................	8	do
White clover,...................	2	do

If orchard-grass is substituted for the timothy and red-top, half a bushel of seed will be required.

It should be an object to feed pastures as evenly as possible; the grass should not be allowed to run up to seed; as this is not only a loss of the grass, but weakens the roots and impairs the vigor of the succeeding growth,—exhausts the soil, and injures the quality of the feed for the next year. The "old fog," if allowed to remain on the ground, makes the grass start thin and spiry, makes it sour and unpalatable, so that stock reject it, unless impelled by hunger, and it forms a favorable bed for the seeds of wild plants, which soon spring up. If the farmer cannot so stock his fields as to prevent the grass from seeding, it is better to mow the spots which are not properly fed, in order to get the benefit of the fall feed; and if the "fog" is not got off in any other way, it is best to burn it in spring. It is a maxim with the best graziers, in England and this country, that the pastures should be well cleared off once a year, in order to prevent the accumulation of old growth.

These remarks apply more particularly to those kinds of grass which form large and strong seed stems, as timothy or red-top. Blue-grass has but a small and feeble stem, but forms more leaf. If grass is wanted for winter use, it should be the growth of the latter part of the season, which makes no seed stems.

The improvement of pastures by manure is often inconvenient; they are frequently at a distance from the body of the farm, and in situations difficult of access. It is therefore expensive, and perhaps impracticable to carry manure to them from the barn-yard. Hence, we must resort to concentrated and portable manures; as plaster, ashes, bones, guano, &c. Cattle and other stock are very likely to leave a large portion of their manure where it does comparatively but little good—in woods or groves, or under fences. This manure might be easily saved and turned to good account. Yards might be made in some convenient part of the pasture, (with cheap sheds if desired,) and a layer of leaves, rubbish from the pastures, or muck, to absorb the urine, and prevent the loss of liquids. The stock might, without much trouble, be kept in these yards, nights; and a large quantity of manure in this way accumulated, which would be of great service if properly spread over those portions of the ground where most needed, or where it would do most good. It should be made fine and evenly spread, and bushed or harrowed in.

Wood's Improvement of the Plow.

The following communication, from the daughters of the late Jethro Wood, we think cannot fail to prove interesting, as connected with the history of the plow. They have placed before us a large amount of documentary matter, in corroboration of their statements, from an examination of which we may safely say, that "the half is not told" in their communication. The extraordinary perseverance of Jethro Wood, was only equalled by the remarkable combination of difficulties he met with—nearly his whole life was spent in labors which resulted in eminent benefit to his country, but which left his family nearly destitute—and, to make an appropriation for his children, now consisting of four daughters, we are satisfied would be but an act of justice on the part of Congress:

The attention which has lately been excited in relation to the history of the improvement of the plow, and the extraordinary and almost unaccountable misinformation which has been spread through papers over the whole country, seems to render it necessary to make a short statement of the facts of the case, all of which can be substantiated by full and authentic evidence.

The late Jethro Wood commenced his experiments for the improvement of the plow, in the early part of the year 1812. Previous to that time, James Small, of Scotland, Robert Ransom of England, and Charles Newbold of New Jersey, had made improvements; after which David Peacock, of New Jersey, in 1814, paid Newbold $1000 for the privilege of using his patent;* (Newbold's plow was never brought into practical use,) and after improvements, obtained a patent himself, known as Peacock's plow: it had a wrought iron share and steel edge. None of these plows were generally adopted by the farmers. According to Judge Leland, of Auburn, (a gentleman intimately connected with the history of the plow,) Peacock's plow cost from $20 to $25, and Small's plow was recommended about or a little before Jethro Wood obtained his patent of 1819, on account of its *cheapness*, being only $22.

Jethro Wood obtained his first patent in 1814, but the invention was a very imperfect one, and was in a few years wholly thrown aside. After five years' labor, he perfected his second patent in 1819, which was his great achievement. The imperfect patent of 1814 has been confounded with the latter by some writers, and its imperfections exhibited as a proof that his invention was destitute of merit, and thus a most unjust and wholly erroneous impression, made by substituting a crude for a finished work.

The difficulties and labors Jethro Wood encountered in perfecting and introducing his plow, were almost incredible. At first, the nearest furnace was in Onondaga county, 40 miles distant; it often happened, when arriving there, that it was not in blast; and sometimes several journeys were necessary to accomplish a single point. According to a statement of Joseph Ridgway, (late Representative in Congress from Ohio,) who aided him at the time, "The cost of the first patterns may be put down at $15,000; the cost of these patterns, however was but an item compared with the expenditures he incurred during the five years he was experimenting, and before he was prepared for combining his piecemeal inventions in the form of patterns, for the plow he got patented. A set of Jethro Wood's plow patterns taken from a set of standard patterns, when dressed up and polished, with their appendages, to cast plows from, may be stated to cost from four to seven hundred dollars, the cost varying according to the completeness of the fixtures for casting from."

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* According to the statement of A. B. Allen, of New-York.

These patterns, in consequence of the prejudice against cast iron or "pot metal," as it was then called, which was considered about as brittle as glass, Jethro Wood was obliged to furnish at his own personal expense to a vast number of foundries and furnaces; and a constant perseverance and travelling was needed to introduce the plow. The unskillfulness of the workmen in those early days was so great, that in many instances, he had to show them by moulding the castings with his own hands; and the prejudices against "pot-metal" were so strong, he was often obliged to give presents to induce them to cast the plow; so that at the expiration of his patent, all his receipts did not nearly equal his expenses, to say nothing of his time and labor. He commenced in comfortable circumstances, out of debt, and ended deeply involved.

But there was another obstacle of a most formidable nature, which rendered his long and laborious efforts a continued series of great difficulties and disappointments, —*a deficiency in the former patent laws*. As soon as by his unwearied labors, the plow had been introduced, infringements commenced; and manufacturers whom he had supplied with patterns, refused to pay premium, and Jethro Wood by resorting to courts of law, could only look forward to defeat, and ruinous bills of costs. The only course left for him, was to strengthen himself by interesting men in his patent; therefore he was obliged to make large assignments of territory, without receiving any pecuniary reward, and without realising any of the benefits he had hoped to receive. Thus the fourteen years of his term was lost to him, while his country reaped the benefits.

In 1832, it was satisfactorily shown to Congress that he had not been remunerated for the benefits conferred on agriculture, by the invention and introduction of his cast iron plow, and the patent was renewed for a term of fourteen years. But a proviso was insidiously inserted in the bill, conferring on the former assignees all the right and privileges they had acquired during the first term of the patent. This proviso almost destroyed the benefits of the extension to the inventor, or his children, by giving to the assignees the largest and best portions of the territory, who had never done anything to merit the consideration of Congress, or for the advantage of the inventor, (with but two honorable exceptions,) but who had made themselves rich by the manufacture and sale of plows. The year following the extension, Jethro Wood breathed his last. The first object of his son Benjamin, (his executor,) was to apply to Congress for an amendment of the patent laws, and several years were consumed before this was accomplished. The second was to commence suits to sustain the validity of the patent. So long as Jethro Wood encountered the general prejudice against his plow, the merit, (or odium as it was then regarded) was fully accredited to him. It was only since its extraordinary value was proved that attempts were made to deprive him of the credit. In consequence of the length of time, witnesses were very much scattered, and pecuniary means being wholly inadequate, the proper witnesses could not be obtained, and from combinations of wealth and numbers, against a single family, the executors suffered several defeats before the patent was sustained. But in the autumn of 1845, after a thorough investigation of all the facts in the case, the United States Circuit Court fully sustained all the points of Jethro Wood's patent, which decision was not made until within a few months of the expiration of the patent, and a short period before the death of the executor.

It is a common but most erroneous opinion, that although Jethro Wood himself reaped no advantage, his heirs have received enormous sums. To disprove this, it is sufficient to state, that it is a well-known fact, that before the final decision of the Court, premiums could not be collected, and the sums received by the administratrices for the brief period of the patent remaining, over and above the expenses of the suits, did not exceed the *small sum of five hundred and forty dollars*. This fact is established by Samuel Stevens, Esq., of Albany, and Judge Leland of Auburn, Cayuga county, as to the cost of the suits; and the affidavit of the administratrices as regards the whole amount of money received by them.

The limits of this article have prevented that appeal to authority which would have corroborated all its statements; documentary evidence could be furnished on all the points. But the following brief testimony from a few persons of high standing in the community, may not be out of place.

Wm. H. Seward, (now United States Senator,) says under date of Nov. 20, 1848, "I am fully satisfied that no citizen of the United States has conferred greater economical benefit on his country than Jethro Wood, —none of her benefactors have been more inadequately rewarded."

David Thomas, for many years chief engineer on the New-York canals, and who was personally acquainted with the efforts of Jethro Wood, from the commencement to the close of his life, furnishes the following testimony: "The exercise of mind and amount of labor to perfect these improvements, can scarcely be appreciated by those who have not been engaged in similar pursuits. It was a new field, and everything had to be learned by experiments. To discover and procure the best material for patterns, and to prepare them, employed him a long time, and a common mind would have shrunk from the difficulties that met him at foundries; oftentimes he had to overcome the unskillfulness or prejudice of moulders, by presents, or by showing them how to manage, with his own hands.

"I am satisfied that all his patented improvements were inventions of his own, originating in his own mind, and to avoid encroaching on what others had invented, he had every volume within his reach that treated of plows, including several Encyclopædias, carefully examined for that purpose.

"To Jethro Wood's name, belongs the honor ot rendering the plow that cheap and efficient instrument that we now find it, truly enabling us to cultivate our fields at less than one-fourth of the former expense, and saving millions to the country."

Samuel Stevens, of Albany, says under date of Jan. 8, 1848, "I am satisfied that neither he nor his children have realised anything from that patent; so far as my humble opinion can have any weight, I think there never was a case in which the children of a public benefactor have such strong claims to be secured by the prolongation of a patent, or to receive some remuneration for the mental labor of their ancestor."

John Porter of Auburn, formerly New-York Senator, says, "I have resided and been in active business in Auburn, the principal town in the county of Cayuga, [the residence of Jethro Wood,] for the last thirty years, and have known him and something about his plow business for many years. It is my opinion, made up from observation of his pecuniary affairs, which were pretty well understood by all his acquaintances in this region, that his receipts from his patent-right were at all times small, and altogether disproportioned to the value of his inventions. And I think this opinion prevails generally, among his acquaintances in this country."

Judge Leland, of Auburn, long acquainted with the labors of Jethro Wood, and thoroughly versed in a knowledge of the different improvements of the plow, gives the following statement in reference to those improvements:

"Wood's plow of 1819, is yet equal if not superior to them all—all that was required, was to take his suggestions in his specification, to make the plow longer or shorter, to suit the earth they were to be used in. When his plow was first put into use, the country was new, and full of what was called cradle-knolls, and required a short plow. As the country became more smooth, the plow should be lengthened. This he suggested, and this is all the best improvers have ever done, such as Delano, the Livingston county, and the Genesee county plows, so called."

In addition to the above, Joseph Ridgway, lately a Representative in Congress from Ohio, and long engaged in the manufacture of plows, states that he has all the varieties of plow patterns, and that during the sale of forty-two thousand plows, he sold forty thousand of the patent of Jethro Wood, and but two thousand of the other kinds.

PHOEBE WOOD,
SYLVIA ANN WOOD,
Administratrices of Jethro Wood.

Study of the Natural Sciences.

EDS. CULTIVATOR—I was highly gratified with Mr. Buckley's article on the study of the Natural Sciences, in your February number, and hope it will have the salutary effect on your readers which its merits demand. Premising that such will be the fact, we may well anticipate a happy and brilliant change; one of incalculable benefit in the progress of the arts, and of soothing influence on the character of mind, as about to burst forth and flow, like pure and healthful waters, over the land.

To no class of men do these studies present themselves with richer promise of reward, than to the farmer. All his labors are in the great workshop of nature, and all his success depends on his moving in cooperation with her secret workings. She humbles herself, and her firmest rocks waste away to aid him in his designs. The clouds spread over the earth, and drop fatness, to increase his riches. The thunder roars and the lightnings play, to give purity to the atmosphere whose healthfulness is his strength. Even winter, with her howling winds and rugged storms, is to him a visitation of mercy, a messenger of love sent to subdue by frost his unyielding soil, and give repose to vegetable nature, which causes it to bloom with richer beauty and in firmer strength in the bright morning of spring. All nature, from the rolling sun with its planetary escort, to the crawling insect so small as to defy the searching of his vision, and so frail that a breath may destroy it, are his, and operate for weal or woe, in aiding him in his designs.

How wide a field is thus opened for his investigation, and what a variety of objects are brought to make demands on his research? Meteorology, Geology, Mineralogy, Botany, Zoology and Entomology, all have their daily and hourly bearing on his labors. A knowledge of them *all*, is therefore desirable. But the question will arise, how are farmers, secluded as they are from the sanctums of science, to make progress in these investigations? Our reply is, set yourselves about it; find out what you can by observation, and the various publications on each particular science, which in these days are so cheap as to be brought within the reach of all, and so familiarly written that any one of ordinary capacity and common school education can readily comprehend. Getting knowledge is like getting wealth. If the mind is intent upon the object, the labor will be directed towards it, and the end will be attained. And how much more lasting is intellectual wealth than that which is measured by dollars and cents. No fluctuations of the times can depreciate its value. The floods cannot drown, nor the flames consume it.

To the young, these sciences present themselves with peculiay interest. *The young are, by nature, naturalists.* Whoever saw an infant that was not pleased with a flower, a pebble, a shell or an animal. See with what energy it will divest the one of its leaves, as if analyses were already commenced, and with what fondness another is caressed. These principles of nature, if cultivated, would lead to results salutary and honorable; a kind look, an approving word—a whisper from the parent when the mind of the child is entertained by these things, might lay the foundation, if not for a Newton or a Franklin, of a being, wise, useful and happy. Merely allow and encourage them, and their go-aheadativeness will enable them to make rich progress.

But if parents are unwilling to *stoop so low* as to converse with and instruct their children from the book of nature and of wisdom, which no mortal mind has yet been able to comprehend, we will suggest the propriety of introducing the studies drawn from it into our common schools, where every child in the land may have an opportunity, without much trouble or loss of time from other studies, to become acquainted with its valuable contents. A half an hour, or even less time, devoted by the teacher, each day, in talking upon these subjects, will effect much more, than in the outset will be supposed.

Our own experience in this matter is the best testimony we can bring in favor of its truthfulness. In our teaching days we were at one time connected with one of the oldest and best established academies in Massachusetts. When we entered upon our service, there was not a mineral to be found on all the premises, unless it were such as nature planted there, or art had introduced to give firmness and security to the ample dimensions of the building. We had not passed a week within those time-honored walls, before we suggested to some of our scholars the utility of geology and mineralogy, as studies worthy of their notice as matter of pastime if nothing more, and before that week was ended, shelves were prepared and some two or three specimens placed upon them, as the corner stones of a future cabinet. The idea once started, spread with desirable rapidity. The members of the school, instead of spending the hours of recess in indolence, or useless amusement, were awake by times, and abroad in the fields snuffing the pure air, and exercising their muscles to sever a fragment from some hitherto unnoticed rock, to search out its peculiarities, and swell an accumulating list of specimens. All, both male and female scholars, were interested in the new study which permitted them to roam over the fields and seek new objects of observation. Nor were these operations limited to the school. Others became interested, and little children often came to present their minerals, and ask what they were, and what they were good for. The same interest was kept up for years, and for aught we know, until the present time; and when we last visited the cabinet, it presented a rich collection from various sections of the globe.

That the same happy effects will result from like causes in all academies and high schools in our country, there can be no doubt. Let cabinets at once be established, and they will go on to final success. Every new class seeing what has been done by their predecessors, will be anxious to do their part, and coming, as they usually do, from different localities, each can, without difficulty, bring different and various specimens.

But for the *common school*, the academy of the million, the place where probably three-fourths, at least, of all the farmers of the next half century, are to spend their scholastic days;—the seminary, which should be so elevated in its character, that all can be qualified for the most honorable and useful stations in life within its walls; for these institutions we plead, and to them we would commend these sciences as of salutary and practical importance. We are aware that the plea will be urged that we have already too many studies in our common schools; and to this we say, if you have, exclude some of less importance, and introduce those whose practical benefit in the every day affairs of life, has been too long overlooked. The knowledge which is the the most intimately connected with the every day concerns of life, is the first knowledge we should strive to attain, and our every day communings with nature, show that she possesses this knowledge.

Another very plausible excuse is, that children at the age of those attending these schools, are too young to put upon these studies. This is the result of ignorance or prejudice in the matter. They are the very first things, as we have before said, that a child would learn if left to his own inclination.

But we have a course to present which will obviate both the foregoing difficulties, if they can in any way be considered as such. Let the teacher say to his scholars as the spring opens, on such a day, my dear scholars, if the weather permit, I propose that we all amuse ourselves by a ramble in the woods, to witness the beauty that spring is scattering over the lap of nature; I am sure it will be what you will all enjoy, and I hope by your diligence in study, you will all be prepared for the pleasant recreation. And when the time comes, and he goes forth with his happy laughing throng, let him call their attention to the shape of a leaf, the varied colors of a flower, or the qualities of a rock; any one or all of them, as circumstances will permit. Observation will thus be awakened, which will require but little effort to increase. Then let him spend a short time, if no more than five minutes each day, in familiar remarks on some topic of natural science, and we will vouch for it, he will soon find subjects enough, and before his term expires, he will see his scholars not only awake in the matter of investigating these things, but possessing an amount of knowledge honorable to those of greater age. We submit it to you, teachers, to try the experiment, and give us a fair result. Wm. Bacon. *Elmwood, March*, 1849.

The Season in Virginia.—Mr. Wm. Shultice, of Matthews Court-House, Va., writes,—"We had a very severe frost here in April, which destroyed the forward wheat in some places and very seriously injured it in others. Many who had planted corn were compelled to plow the ground again and replant. The early fruits, as peaches, cherries, &c., were totally cut off, except in some favorable locations."

Preservation of Vegetables.—Mr. Hamilton Perry, of Lansingburgh, informs us that he has succeeded in keeping beets through the winter by the following mode:—He packs the roots in barrels or casks, with earth in which ashes, at the rate of about a peck to a bushel of earth had been mixed. The roots being placed in layers, and each layer covered with the compost. He states that he has kept them sound in this way three years.

Comparative Profits of Free and Slave Labor.

The following communication, in answer to the inquiries of "A Southerner," in our May number, is from the pen of a distinguished farmer, who is thoroughly conversant with the subject on which he speaks. In his description of events that have transpired within his own observation, he has been governed by the same spirit of candor which was evinced by the inquiry of our southern friend; by whom, as well as by many others, his remarks will be read with interest.—Eds.

Editors of the Cultivator—In your May number page 156, a correspondent signing himself A Southerner, and hailing from Barboursville, Va., asks for information through your paper, upon the subject of the profits of Free as compared with Slave Labor. The information is asked in so frank and proper a manner, with so natural a desire to come to a correct conclusion, that no intelligent northern man, who is a friend to free labor, from honest convictions of its decided superiority over slave labor, as best promoting individual and national prosperity, and who can base his reasoning upon his own personal observation and experience, should hesitate to comply with so reasonable a request.

The comparative prosperity of the North over the South, has been attributed in a great measure, to the superior cheapness of free, over slave labor. Here, is a southern individual, himself a slave-holder, and who acknowledges its unprofitableness, but modestly and properly asks the north—"If you are so much better off than we are, tell us why you are so?" If northern men do not respond to these interrogatories, fairly and fully, let them cease their clamor about free labor, and when, hereafter, they speak in derogation of slavery, they must base their plea upon some other ground than upon its unprofitableness.

Whether I shall meet the question fully and satisfactorily, remains to be seen; but I will not hesitate to premise, that I have very decided convictions in favor of free labor. It may be as well to say that I am a farmer, not from necessity, but from the opinion I have formed of its excellence as a pursuit; and having now followed it for many years, have a growing desire to continue it; because it contributes to my health and happiness, and it is an employment of which I never tire. I take the more pleasure, therefore, in imparting any little information I possess, for the benefit of those who ask it. I have lived long enough to draw practical information from the pursuit of husbandry, as it was practiced in the State of New-York, when we cultivated our farms with slaves; and it being now near thirty years since the emancipation of the blacks in this State took place, we have had an abundance of time to form an opinion upon the relative profits of these two kinds of labor.

It is useless to speculate upon this subject—experience is better than abstract reasoning, when that reasoning is based only upon specious hypothesis. When I therefore, take a retrospective view of the agriculture of the county in which I reside, say from 1805 to 1825, (the last about the time our emancipation bill passed, and which was to go in part into gradual operation,) a county which has no superior advantages of fertility of soil over many other counties in the State, and for which review I had great advantages by frequently traveling over it,—and contrast the appearance of its cultivated farms then and now, I think I can give a ready answer to this knotty question.

Then, the negroes did nearly all the work that was done. The white man, if possessed of any property, spent his time, not on his farm, but on the road and in the tavern, at the horse-race, or where pleasure or amusement called him. For the son of a man of property to labor, except very slightly, was derogatory to his character; and an opinion was very generally entertained, that there was no necessity, much less propriety, for a young man to labor. But how was their time to be spent? To do *something*, is natural to our wishes and habits, and if we are not engaged in something useful, we can hardly be kept out of mischief. It was not the fashion then to give, except to a favorite son, a finished education; but as the majority would not stay at home, where they did nothing, they sought after some employment to spend their time, which employment would naturally be found where others, like themselves, congregated; and that was in public places, and in public or private amusements. In this, they only followed the example of their fathers, who in most instances, after a slight morning survey of the farm would be found either at the country store, or at the tavern. These certainly, could not be the places where an agricultural community could better its condition; where having fled from the labor or hasty direction bestowed upon the farm, they were strongly tempted either to unnecessarily spend the avails of its products, or to form habits of the grossest dissipation. Hunting and fishing were harmless occupations, compared to those taught in these unfortunate gatherings; and how many fine estates have I seen spent, and their owners, and the natural heirs of them, beggared by the indulgence in these idle and vicious habits, practiced by nearly a whole community! In my mind's eye, I can now run over a long catalogue of persons, who at that time were some of our most promising young men, who have fallen victims to those habits of the times, and the estates which they ought to have inherited, passed into the possession of others.

These were the times when the blacks only labored. The white man considered himself above labor. The earnings of the slave, therefore, while they contributed to his support, likewise did their share of his ruin. True, in comparison to population, we had not as many slaves as they have at the south; but we had enough to till our land as it was then tilled, and thus take from us a useful and necessary personal occupation. The labor done by the slaves, had to support the white man and his family, who were only consumers, besides supporting the slave and his family. Here were useless mouths to feed, useless backs to clothe—and successful indeed was that farmer, who under this management, could at the end of the year, make both ends meet. When I recall to mind the imperfect method of cultivation practiced at that time—the want of comforts for the use of man—of care for his stock—the appearance of his farm, fences and outbuildings—the quantity of land lying waste—the imperfect formation of roads and bridges—the want of school-houses for the education of children—of churches to collect the population on the sabbath—and the general lack of prosperity pervading almost all classes, I but recal what I have too often witnessed, and the recollection is too vivid to be soon effaced from my memory.

The morals of the community corresponded to these outward appearances. It was then the custom for the men, both old and young, of a neighborhood, by 11 o'clock in the morning, to collect at the nearest public houses—of which in many townships there were scores—remain drinking and talking over the news until high noon—leave for their dinners, and by 5 P. M. to re-collect to indulge more freely in drinking or gambling; and to while away the time, possibly at a cock-fight, or horse-race, or have a fight among themselves. About 12 o'clock at night they retired to their respective homes to re-enact the same or similar scenes the next day. These were events of almost daily occurrence. Idleness was the parent of immorality, and that in turn brought about the ruin of tens of thousands of families.

When we had arrived at about the acme of this state of society, emancipation of the colored race was called for. At first, much objection was made to it by most of the owners of slaves. The cry was—"we shall be ruined. Who is to work our estates? The community will suffer for the want of laboring men, and we all will be impoverished together." But the good sense and patriotism of the freemen of our State, prevailed over all the objections urged; and depend upon it they were not lightly pressed by able advocates; and our bill of emancipation, after a long and severe struggle, at length became the law of the State. I am not aware that much difficulty, for any length of time, was created by this change in the manner of working our estates. Blacks that were liberated, were hired in many instances, and in a short time a white population came forward. and all the labors of the farm went on with more than the accustomed energy. The sons of the farmer, instead of spending their time in idleness and dissipation, from necessity, as it were, became producers instead of consumers. All the industry of the community was called into requisition. It became *popular* for all to labor in their several vocations, according to their respective abilities, and after the lapse of about twenty-five years, an entire change has been wrought in the whole state of society.

As to laborers, the vacuum thus temporarily created was more than made up by white men, and the effect produced by the change, has been productive of the most wonderful and propitious results. The whole face of nature is changed, and all around gives evidence that a great work has been slowly, silently and happily accomplished. The uncomfortable old houses of the farmers have given way to new and more commodious ones. The outbuildings are enlarged, improved, and made ornamental to the establishment. Fences in most instances, are made that will secure the growing crops; waste land improved and brought into successful cultivation; the stock changed into objects of beauty as well as profit; the roads, bridges, school-houses and churches, such as do credit to an industrious, intelligent, thriving moral and religious people. These are the fruits of free labor, calling upon every man to act well his part in society; and the bounties of Providence that have followed, are the strong evidences of what well directed industry will accomplish.

That the benefits flowing from this state of society have been fully realised, as far as pecuniary profit is concerned, I will here give by way of illustration, conclusive proof. In the town in which I reside, the soil of which is easily worked but not naturally very fertile, I well remember the time when few men had money to loan, and but little of it could be procured. Were it necessary, I would now name the individuals, but that is not required. How is it now? In a rural population of about 4,000 in the town, and for about four miles each way around me, I know that, independent of real estate, they have at least a million of dollars on loan, and this in most instances belonging to farmers. I will give one more illustration to show that on this point I cannot be mistaken. Within my time, and that has not been very lengthened, lived a farmer near me, who had about 700 acres of our best land, and a personal estate of about six or seven thousand dollars, obtained by inheritance. He cultivated his land with seven or eight negroes, and had a corresponding number of females and children. The owner of these was sober, intelligent and careful, so far as he thought was then required. He had a family of sons and daughters. He died in 1815. His personal estate was spent. His real estate was divided among his children. To one son he gave his homestead, and about 160 acres of land. This son discarded the slaves after a short trial—hired his labor done, and although not more economical nor attentive to his business than his father was ner better qualified to carry it on, yet he has added to his estate, and made it more than double in size; and although he has had a larger family to support and educate, he has done it much more thoroughly, and is a man of wealth, independent of the value of his farm. But this is only one instance out of a thousand. It is the application of the theory, that free labor is much more profitable than slave labor. And why should it not be so? Will not two free men do the work of three or four dandling slaves? The one you can discharge if he is indolent; the other you are obliged to maintain, whether industrious or indolent. The one knows that his bread is the fruit of his industry; the other is like the ox who must be constantly goaded to perform his task. The one is economical from necessity; the other looks to his master to supply his every want, both in health and sickness. His family is often more numerous than that of his master, and his imperfect and unprofitable labor is the only restitution he makes. If improvement is necessary in the cultivation of the estate, is he the man to carry it out? If economy is to be practiced in the several departments of farm-labor, is he the man to make that economy effective to the owner? What stimulus has he to urge him on to labor, other than the voice of his overseer? Or why should he practice self-denial? Can such a man fulfil the duties and meet the responsibilities that are required for the improvement of our society, and the amelioration of our condition? Certainly not. One day is to him as another, and the sluggish accomplishment of his daily task, is all that he looks to.

Agriculture is an art that is in its nature progressive. A virgin soil at first, yields bountifully to its cultivator; but like our bodies, if overtasked, without a proper supply of aliment, it soon loses its productiveness; and it requires the exercise of mind as well as the labor of the hands to repay us for its cultivation. And are slaves the persons who can compete with the energy and intelligence of the freeman, so as to make his labor profitable to his owner? The farmers of the State of New-York, for the last ten or fifteen years have made great advances on the method of cultivating their farms. Hence the establishment of state and county agricultural societies, which are only aids in the work of improvement; and they now think of the establishment of a school of agriculture, both theoretic and exrimental, to advance it as a science as well as to make it practical as an art. Are slaves to be taught in these schools, or can they receive any benefit from these establishments? for, to my apprehension they will become most essential aids towards the renovation of the soil in the older states of the Union, where by overcropping they have exhausted their fertility.

But as enough has been said on these subjects, we will now proceed to answer some of the questions of "A Southerner." After stating the number of acres of his farm. (1200) and its proportions of arable, meadow land, &c., he asks—"How can I obtain the labor to keep up about 15 miles of fencing, and to cultivate my farm to advantage?" I answer, that doing the work well, does not require so much fence to be made every year, and that eight good laborers are all-sufficient for his purpose, except a small additional number in harvest-time. I speak from experience. I think I make as much fence as the inquirer, (but not annually,) as I farm about 1,000 acres; and were I as efficient as some of my neighbors, I have no doubt the income from my land would be materially increased; but I have no reason to complain. A northern farmer with that quantity of land, would think he did very poorly if he did not lay up from $2,500 to $5,000 per annum, after all his expenses were paid, besides enjoying the first fruits of his products. But to do this, he would no more think of feeding 60 or 70 persons, than of supporting all the paupers of a parish almshouse. How can a farmer secure anything over for himself, in the way of profits, if so large a number, mostly of helpless persons, are first to be fed, clothed, and supplied, as well in sickness as in health? The result is impracticable, and the master and mistress are the slaves, not those who receive bread from their hands. With the principle of free labor, the people of the north, having tried both kinds, are satisfied which is the cheapest and best, in every sense of the word. Experience has stamped a conviction on their minds that slave labor, for economy, freedom from care, careful cultivation, the advancement of society, both in promoting education, morality, and the prosperity of a people, will bear no comparison with the benefits that result from free labor; and they would no more think of going back to the old system of slave labor, than the freemen of the American Republic would think of going back to the establishment of a monarchial government. The other inquiries, as they are made to obtain information, would naturally be answered by employing competent northern men to take the direction of affairs, and to be left to the manner of farming with which they were accustomed. Changes could only slowly be made, and ought to be conducted with prudence and good judgment, to lead to beneficial results. NORTHERNER. *State of New-York, May* 15, 1849.

Agriculture of Seneca County, N. Y.

The report of the Seneca Co. Ag. Society, for the year 1848, prepared by its President, JOHN DELAFIELD, Esq., contains many valuable statistical facts in regard to the resources, improvements, and productions of the county. The report embraces in a tabular form, returns from the several towns in the county. The writer of the report observes that the returns may not be entirely correct, but that "they must be received as the nearest approach to truth, until the Legislature shall adopt the easy and more accurate method of annual returns from the whole State, through the instrumentality of the town assessors."

The staple product of the county is *wheat*, the average yield of which is stated at twenty bushels per acre. The variety called the "Hutchinson wheat" has heretofore been preferred, but the "Soule's" variety is increasing. *Indian corn* has not been much raised, till of late years, the demand for exportation has given quite a stimulus to its culture. The average yield is thirty-two bushels per acre; but many farmers produce sixty to eighty bushels per acre. *Barley* has latterly deteriorated in the county, generally, the yield for 1848 not being over twenty bushels per acre. *Rye* is only cultivated on the lighter soils of the county, which are not so favorable for wheat—average yield twelve to fourteen bushels per acre. *Oats* are quite extensively raised, yielding about forty bushels per acre on the average. *Buckwheat* is raised to a moderate extent, both for the grain and for plowing in as a manure. The *potato* crop has suffered much from the "rot." *Flax* has formerly been cultivated largely for its seed, but has been given up on account of its exhaustion of the soil. The culture of *fruits*, especially apples and pears, is receiving much attention. The county has for some years been celebrated for its apples, which have sold readily at twenty-five cents per bushel. Plum trees have been injured by the "black knot."

The *dairy* only receives the attention necessary for supplying the inhabitants with milk and butter. *Cattle* are said to be generally good. Crosses of the Short-horn, and also of the Devon breed, with the common stock, generally produce good milkers. Much attention is said to be given to rearing horses, which yearly improve in quality. *Sheep* are mostly of the Merino

Estimate of the Principal Products of Seneca County for 1848.

WHEAT.

TOWNS.	Acres cultivated.	Quantity of seed per acre.	Time of sowing or planting.	Quantity raised per acre.	Cost per acre.	Whole quantity in 1848.	Whole cost of the crop	Value at the market rates	Profit.	Profit per acre.	Profit per bushel.
		Bushels.		Bushels.		Bushels.		At $1.10			Cents.
Covert,	4,000	2	Sept 5 to 25	19	$9 00	76,000	$36,000	$83,600	$47,600	$11 90	62
Fayette,	7,200	1½ 2	10 " 25	20	10 00	144,000	72,000	158,400	86,400	12 00	60
Junius,	2,800	2	5 " 25	20	5 00	56,000	14,000	61,600	47,600	17 00	85
Lodi,	4,320	1¼	5 " 20	19	9 00	82,080	38,880	90,288	51,408	11 90	62
Ovid,	3,500	1½	5 " 20	25	10 00	87,500	35,000	96,250	61,250	17 50	70
Romulus,	3,500	2	5 " 25	13	10 00	45,500	35,000	50,050	15,050	4 30	30
Seneca Falls,	2,500	2	5 " 25	20	10 00	50,000	25,000	55,000	30,000	12 00	60
Tyre,	1,980	1½	10	16	4 00	31,680	7,920	34,848	26,928	13 59	85
Varick,	3,300	2	5 " 20	14	10 00	46,200	33,000	50,820	17,820	5 40	38
Waterloo,	2,000	2	5 " 25	13	9 00	26,000	18,000	28,600	10,600	5 30	4
	35,100					644,960	$314,800	$709,456	$394,656		

BARLEY.

TOWNS.	Acres cultivated.	Quantity of seed per acre.	Time of sowing or planting.	Quantity raised per acre.	Cost per acre.	Whole quantity in 1848.	Whole cost of the crop	Value at the market rates	Profit.	Profit per acre.	Profit per bushel.
Covert,	250	2	May.	20	4 00	5,000	$1,000	$2,500*	$1,500	$6 00	30
Fayette,	1,100	2	1 " 10	20	6 00	22,000	6,600	11,000	4,400	4 45	20
Junius,	700	2½	1 " 10	25	3 00	17,500	2,110	8,750	6,650	9 50	38
Lodi,	576	2	April 20	25	3 50	14,400	2,016	7,200	5,184	9 00	36
Ovid,	80	2	May 1 " 10	25	6 00	2,000	480	1,000	520	6 50	26
Romulus	575	2½	1 " 10	25	6 00	14,375	3,450	7,187	3,737	6 50	26
Seneca Falls,	700	2½	1 " 10	25	6 00	17,500	4,200	8,750	4,550	6 50	26
Tyre,	990	2½	1 " 10	18	2 50	17,820	2,475	8,910	6,435	6 50	36
Varick,	400	2½	1 " 10	19	6 00	7,600	2,400	3,800	1,400	3 50	18
Waterloo,	400	2 to 3	1 " 10	15	5 00	6,000	2,000	3,000	1,000	2 50	16
	5,771					124,195	$26,721	$62,097	$35,376		

OATS.

TOWNS.	Acres cultivated.	Quantity of seed per acre.	Time of sowing or planting.	Quantity raised per acre.	Cost per acre.	Whole quantity in 1848.	Whole cost of the crop	Value at the market rates	Profit.	Profit per acre.	Profit per bushel.
Covert,	1,000	2	May 1 " 10	45	$4 00	45,000	$4,000	11,250†	7,250	$7 25	16
Fayette,	2,000	3	1 " 10	35	5 00	70,000	10,000	17,500	7,500	3 75	10
Junius,	800	3½	1 " 10	45	2 50	36,000	2,000	9,000	7,000	8 75	19
Lodi,	998	2	April 20	50	3 50	49,900	3,493	12,475	8,982	9 00	18
Ovid,	1,000	2½	May 1 " 10	45	6 00	45,000	6,000	11,250	5,250	5 25	11
Romulus,	1,250	2½	1 " 10	37	6 00	46,250	7,500	11,562	4,062	3 25	8
Seneca Falls,	800	2½	1 " 10	38	6 00	30,400	4,800	7,600	2,800	3 50	9
Tyre,	1,188	3	1 " 10	25	2 50	29,700	2,970	7,425	4,455	3 75	15
Varick,	1,000	2½	1 " 10	37	6 00	37,000	6,000	9,250	3,250	3 25	9
Waterloo,	700	3	1 " 10	32	4 00	22,400	2,800	5,600	2,800	4 00	12
	10.736					411,650	$49,563	102,912	$53,349		

INDIAN CORN.

TOWNS.	Acres cultivated.	Quantity of seed per acre.	Time of sowing or planting.	Quantity raised per acre.	Cost per acre.	Whole quantity in 1848.	Whole cost of the crop	Value at the market rates	Profit.	Profit per acre.	Profit per bushel.
Covert,	1,100	¼	M'y10 " 30	30	$8 00	33,000	8,800	$14,850‡	6,050	5 50	18
Fayette,	3,000	¼	1 " 8	30	7 00	90,000	21,000	40,500	19,500	6 50	21
Junius,	1,000	¼	10 " 20	45	5 00	45,000	5,000	20,250	15,250	15 25	34
Lodi,	1,122	¼	10 " 30	30	9 00	33,660	10,098	15,147	5,049	4 50	15
Ovid,	1,100	¼	10 " 30	38	7 00	41,800	7,700	18,810	11,110	11 00	26
Romulus,	1,000	¼	10 " 30	35	8 00	35,000	8,000	15,750	7,750	7 75	22
Seneca Falls,	750	¼	10 " 25	28	8 00	21,000	6,000	9,450	3,450	4 60	16
Tyre,	1,584	¼	10 " 15	30	6 00	47,520	9,504	21,384	11,880	7 50	25
Varick,	1,000	¼	10 " 25	25	8 00	27,500	8,800	12,375	3,575	3 25	12
Waterloo,	1,000	¼	10 " 30	35	7 00	35,000	7,000	15,750	8,750	8 75	25
	12,756					409,480	$91,902	184,266	$92,364		

* At 50 cents per bushel.—† At 25 cents.—‡ At 45 cents.

breed. Their fleeces average three and a-half pounds each. *Swine* are only kept to consume the offals of the farm. Crosses of the Berkshire, Chinese and Byfield prevail.

The introduction of *improved implements of husbandry* and machines for agricultural purposes, has been of great advantage to the county. *Hussey's Reaping Machine* has been considerably used, and is highly approved. The report says—" By the aid of this reaper, with the previous use of the cultivator, named below, several farmers have been able to raise and prepare their wheat *for delivery*, in perfect order, at a cost varying from twenty-six to thirty cents per bushel." The cultivator alluded to in this extract, is said to have been introduced by Mr. TRACY, of Wayne county, and it is considered an improvement on Ide's. Recent *improvements in the plow*, by Mr. BURRALL, of Geneva, and others, are commended. The *corn and cob crushers* of SINCLAIR and of PITTS are deemed useful to the stock-feeder; and the *portable mill* of Ross & Co. is spoken of with much approbation.

The distribution of the *Transactions of the New-York State Agricultural Society*, and the circulation of agricultural periodicals, are mentioned as " shedding a vast benefit " on the county. " From these sources," says the report, " science is made to confer lasting benefits upon us, driving away and steadily diminishing the misty, baleful influences of ignorance and empiricism."

The tables alluded to, are made up in admirable form, and might advantageously serve as models for other counties and societies. We give above four of them, showing the amount and value of the four principal products, wheat, barley, oats and Indian corn.

THE QUEEN BEE.—It is well known by apiarians that bees will not swarm without a queen goes with the new colony. In order to prevent swarms from going to the woods, some experienced bee-keepers watch for the queen, and when she comes out of the hive, cut one of her wings, which prevents her from flying. The bees will generally make a " pitch " near the hive, when the queen may be secured, and with the young swarm, placed in a new hive. Sometimes the bees may go to the woods, but will return, if the queen is retained.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS

Care of Fruit Trees.

It often happens that young fruit trees, which have been well transplanted and properly attended to in the spring, are neglected at midsummer. The soil becomes hard, and its moisture is withdrawn and its fertility lessened, by a growth of grass and weeds. To remedy this evil, the unskilful cultivator waters the surface, but instead of reaching the roots, the hard soil excludes the water, which only tends to the further hardening and baking of the surface, while the roots remain dry below. Many young trees thus perish in hot weather; or surviving, make a feeble growth, and are more liable to destruction by winter frosts.

Under good management, the soil is kept clean and mellow for many feet about each tree, during the whole season. Treated in this way, the degree of moisture which the earth will retain a few inches below the surface, compared with the meagre supply of a hard or grass grown surface, is surprising, and it renders watering rarely necessary.

Mulching, or covering the ground about the tree with straw, coarse yard litter, or leaves from the wood, will, if timely performed, obviate the necessity of watering, even in extreme cases. Midsummer drouths, will scarcely affect trees thus protected, in connection with a clean mellow surface. A correspondent of *The Horticulturist* mulched 50 trees out of 150, all of which had commenced growth alike. Those which were mulched, all lived. Of the remaining hundred, fifteen perished.

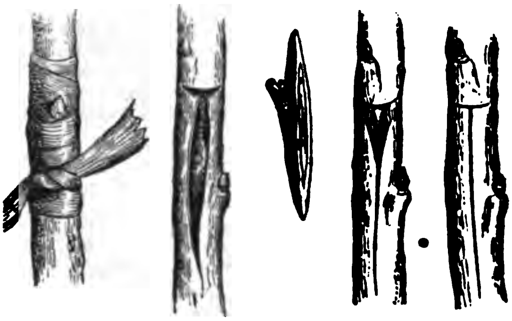
Where, however, trees have been neglected till the period of severe drouth, and where watering becomes necessary the hard surface should be removed as far down as the roots will admit, and the water then poured on, and the earth replaced. Mellowing the surface and mulching will afterwards prove very beneficial.

Instead of watering the roots, which should be very sparingly performed on trees not yet in leaf, a frequent washing of the stems and branches has been found of great advantage to young trees the leaves of which expand tardily. Water applied copiously at the roots, before there are leaves to draw it up, is apt to induce water-soaking and decay; but if the surface of the bark is moistened, immediate absorption takes place through the pores, and a daily repetition, with shading from the sun, will usually restore to freshness and vigorous growth, trees which have become actually shrivelled from drying.

In addition to proper treatment of the soil, and watering, fruit trees need watching against diseases and enemies. The *fire-blight* will soon make its appearance; the remedy is to cut off instantly and burn the limb, two or three feet below the affected part. This course, if faithfully pursued, will in most cases, arrest the disease. The black-knot on the plum needs a similar treatment; but as it spreads less rapidly, little more than the affected parts need cutting off; and where the excrescences are on the trunk or large branches, the wounds should be washed with a solution of copperas. Peach trees should be examined for the peach-worm, which confines itself to the bark at the root, and is hence easily followed in its hole and destroyed. The apple-borer penetrates the solid wood, and is far more difficult to destroy, and it is nearly impossible to save a tree, unless taken early. At first, the worm may be cut out with the point of a knife; or if deeper, it may be punched to death in its hole by a flexible wire or twig. It is asserted that the entrance of the borer may be prevented by removing the soil, and applying a wash of sulphur, soft soap, and tobacco water, to the base of the trunk; and that this mixture is so offensive to the perfect insect, that no eggs are ever deposited in bark to which a coating has been applied.

Budding Cherries.

Inexperienced cultivators are often much puzzled to account for their want of success in budding the cherry. Usually, it should be budded earlier than most other kinds of fruit trees; but there is a certain period in the growth of the stock, most favorable to success, varying considerably with seasons and circumstances. If the work is done too early, the buds will not have become sufficiently matured; if too late, the vigor of growth in the stock will have too much subsided, and adhesion will not take place. The best rule, applicable to all cases, is to insert the buds just as *the terminal buds of the stock commence forming*. Adhesion at this period takes place perfectly, and the inserted buds are usually at that time well hardened. Adopting this rule, we have been quite successful at all the various periods from the middle of summer to the first of autumn.



59—BUDDING CHERRIES.

When the scions are not well ripened, success is greatly dependant on cutting out with the buds a large portion of the wood—say at least one-third of its diameter, or nearly one-half. This prevents the drying of the bud till complete adhesion takes place.

The above figures very distinctly represent the successive stages of budding, and may hence be useful to those not acquainted with this easy mode of propagating fruits, which is not so extensively known as grafting.

Summer Pruning Hardy Grapes.

There are two leading principles to be adopted in the summer pruning of the grape vine:—1. Fruit cannot grow and ripen without the leaves. 2. Shoots and leaves cannot become fully developed in growth, if so thick as to form a dense mass.

The summer pruning of hardy grapes usually consists in cutting or pinching off every shoot, when the grapes are about the size of peas, about three joints above the upper bunch. The object is "to prevent the vigor of the vine all operating in the formation of leaves and wood, and to throw it into the fruit;" as well as to expose the bunches to the action of the sun. Now, the growth and ripening of fruit is wholly dependant on the leaves; and the greater the amount of leaves, provided they are not crowded, and are fully exposed to the light of the sun, the more perfect will be the fruit. For this reason, it is better to reduce the number of shoots, either by leaving but few buds at the winter pruning, or by removing entirely, all superabundant shoots as early in the season as practicable; and to omit *stopping* or shortening the shoots till the fruit is nearly of full size, or about the end of summer, and then only at the extremity of the shoot, leaving all the well-formed foliage.

A very erroneous opinion prevails that the ripening of the fruit is hastened by its full exposure to the sun, independently of other causes. Experience has amply demonstrated that a fully developed and abundant foliage, itself well exposed to the light and air, is the sole influence in the successful growth and maturity of the fruit. Any cultivator may convince himself of this fact, by wholly defoliating a branch of any fruit tree, before the crop ripens, and by taking off a large portion of the leaves on another, and compare the results with a tree in full and healthy foliage, the quantity of fruit being the same in all cases.

Grafted and Budded Young Trees.

Young fruit trees, which were budded the last summer, and headed down the recent spring, or which may have been grafted this year, should be occasionally examined, and all suckers or side shoots from the stock rubbed or cut off, which would otherwise interfere with the growth of the graft or shoot.

Many varieties of fruit trees, and more especially those which approach a horizontal or oblique growth of their side-shoots, will form crooked trees, if the buds are suffered to take their own course from the stock. This may be prevented, and a neat erect form given to them at the point of union, by tying them up closely to the stock, a few inches of which should be left for this purpose, while the shoots are yet young and flexible. When, in a month or two, they have become stiff, this portion of the stock is pared neatly off, and the wound soon heals, and well-shaped trees are thus obtained. With such erect growing varieties as the Early Strawberry apple, Madeleine pear, and Black Tartarian cherry, this may not be so essential, altho' it still adds to their beauty; but with more spreading sorts, as Roxbury Russet and Fall Pippin, or Elton and American Heart, it becomes quite important. The annexed figure exhibits this mode of treatment.

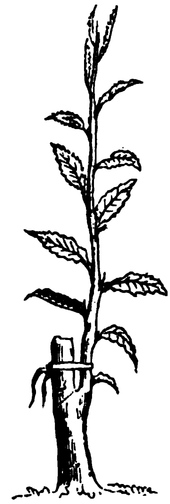


FIG. 60.

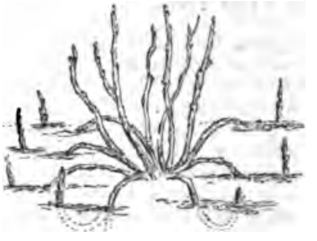
Increased culture of Fine Fruit.

The rapidity of increase in the planting and cultivating of fine kinds of fruit, within the past five years, cannot but afford gratification to every well-wisher of his country. It is only to be regretted that so many fine farms still remain but scantily supplied with the best varieties, and that the majority of the most delicious sorts, are but partially known. E. C. Frost, of Chemung Co., N. Y., furnishes in the *Genesee Farmer*, the following singular instances of a lack of intelligence in this respect, which, happily, are fast passing away to the things that *have been:*

"I once had a hand assisting in setting trees, some fifteen or twenty sorts, and each tree was labelled, who remarked, 'this is all nonsense, so many kinds of apples; there are but two kinds, *sweet* and *sour*.' I have heard persons while eating an apple say, 'what a fine apple this is, how *mealy* and good.' Once a person bought two lots of trees, from different venders, and remarked to one of them, 'I like the other man's trees much the best, because they had so few roots. I could get them into a much smaller hole, and set them out quicker than yours.'" !!!

Layering Grapes.

Those who wish to increase their stock of grape vines, should not neglect the proper season for layering. This is a very simple and very certain way to obtain new plants. First make the soil clean and mellow round the main vine, then bend the present year's shoots down into small excavations made for the purpose, and cover the middle portion with soil four or five inches deep. They will have become well rooted by autumn, and may then be separated and set out as new plants. Each layer, being cut in two at the middle, will make two new vines. The annexed figure exhibits distinctly, the mode of making layers.


61—LAYERING GRAPES.

he Peach Crop.

The remark was made in this paper, early the present spring, that most of the peach crop in Western New-York, had been destroyed by the cold of winter. This remark, founded on an examination of the fruit buds in different localities, nine-tenths of which, on an average, were destroyed, has been misunderstood by the editor of the *Genesee Farmer*. It was not intended to give the impression that there had been a total destruction in any one region; and it might have been added that the uninjured remaining portion, would, in all favorable localities, (in one of which P. Barry resides,) be sufficient to furnish a good, though not numerous crop of peaches, which would doubtless be of much better quality for the thinning it had thus received; and which a casual observer would not have noticed when the trees were in full flower.

Utility of Birds—Cherries.

We are gratified to perceive the increase of public opinion against the worse than idle practice of shooting birds "*for sport*." Yet we think the advocates for the birds do not usually go far enough. Their plea is extended to the robin, the oriole, the thrush, and the numerous classes of sparrows, buntings and warblers, which far overbalance the slight injury they may commit, by the innumerable insects destroyed by them. But we are sorry to see the king-bird, black-bird, crow, and the owls and hawks, placed without the boundary of mercy. The king-bird, if he eats bees, destroys vast numbers of gad-flies; the black-bird and crow are equally useful in another direction, while every farmer may, by simple preventives, save his corn from their depredations. The snakes and mice devoured by the owls and hawks, are incomparbly greater than the few chickens they may chance to light upon. If beauty is any protection, what individual among the whole feathered tribe possesses the soft and beautiful plumage of the owl, or the symmetry and noble bearing of the hawk? It is time then, that prejudice had given way to justice and humanity.

We know of but one exception among the birds. This is the *cherry or cedar bird*. We have found it impossible to save our cherries, so long as it is permitted to visit our orchard undisturbed. Cedar birds, unlike most others, do not merely devour a certain portion of the crop and leave the rest. They devour, pollute and mutilate, till nothing valuable is left. Last year we lost in a few hours, a fine crop of early pears by their depredations; and a neighbor, nearly his entire supply of superb cherries, consisting by estimate, of twenty bushels. Various remedies have been tried. Flags or strips of muslin, hung in the tree, will repel some birds for a time, but cedar birds are not of the number. Covering with nets is costly, and unless the covering is strong, the birds will break through. The suspension of fragments of looking glass, so strongly and repeatedly recommended by horticultural journals, we have found about as efficient as to try to frighten a locomotive with an umbrella; or as the scare-crow, covered with old clothes, the birds building a nest in one of the pockets. The only remedy is shooting, which if steadily pursued for a few days, will drive away entirely the whole flock of cedar birds. If any of our readers have discovered a better remedy, it would prove of great value to the public if made known.

Time for Transplanting Evergreens.

The following observations on this subject, we copy from the *Prairie Farmer;* and after various experiments which we have witnessed, upon thousands of transplanted evergreens, we have arrived, on nearly every point, at the same conclusion. It is true, the object of the writer has not been to give every essential requisite to success, such as keeping the roots wet from the very moment they are taken up, till they are plunged in mud and replanted; or still better, cutting a large cake of earth with the spade, to be removed with the roots; but as far as the remarks go, they are undoubtedly founded on correct practice:—

"As to the best time for transplanting evergreens, there has been much said first and last; nor do we think the public mind clear on the subject as yet. We do not pretend to understand as well which is, as which is not, the best time. A class of writers have uniformly directed to move them in early summer, when they were in full growth; affirming that then the tree will best overcome the debility caused by a removal. We have learned this much, that such a time is probably the worst that could be selected. It is certainly very far from being the best. Evergreens removed at that season, will exhibit the wilting of the tender shoots, even on a wet cloudy day, nor will a ball of earth removed with the roots, serve to mitigate the difficulty. Such trees can only be saved by the most unremitting care and labor.

"We are of opinion at this time, that evergreens are no exception to the rules which regulate the removal of deciduous trees—and that the best time to move them, will be found to be that in which other trees are moved. Transplanting may, perhaps, be continued later than with others, because they do not begin their growth quite as early. But as soon as the new shoots begin to appear, it is time to stop work among them.

"Another standing error regarding evergreens is, that they must not be pruned on removal. All the reason we have ever heard given, is, they exude gum. If any body should ask—'What if they do exude gum?' we should only be able to give the answer made by the Speaker of the Legislature of Hull. The said Speaker had found his fellow legislators disposed to be unruly. His only mode of quelling the disturbers was to threaten 'to name them.' This was, for many a year, sufficiently potent. Finally, a member ventured to ask the Speaker what would be the effect if he did 'name one?' 'Heaven only knows,' said his dignity, 'I don't.'

"We do not suppose evergreens any exception to other trees in regard to the practice to be followed with them, either as to the time of removal, or as to the fact of trimming. The mode of cutting should be somewhat different from that practiced with deciduous trees. They do not push out shoots so easily from the trunk; and it would not be safe to cut them as close. The best mode of trimming, would be that of shortening the branches; cutting off half or two-thirds their length, as should be preferred. This is also the best mode of trimming small deciduous trees; but in removing larger ones, such as are taken from the forest for shade, it is necessary to practice cutting much more severely; unless they are taken from open ground, and dug up with extra care, so as to save as many roots as possible. If carelessly dug, such trees should be shortened from the top one-third or more, and all the side-limbs entirely removed, leaving them like bean poles.

"This mode of treatment would probably be improper for evergreens, though we have never made any experiments with a view of ascertaining how much cutting they would bear.

"In removing evergreens, or any other forest tree, it should be remembered that those which grow in open grounds, or near them—exposed to sun and air, will be much the best—supplied as these are with many more small roots than those grown in the shade of others."

Clean Culture.

W. S. Wait, of Illinois, remarks in the *Prairie Farmer,* "relative to clean culture for apple trees, I am entirely satisfied, and can assure every man who owns a tree, that cultivation will not only *double his crop,* but add at least *one hundred per cent in value to the quality of his fruit.*"

Accuracy among Nurserymen.

F. K. Phoenix, an intelligent and accurate cultivator, residing at Delavan, Wisconsin, gives the following just remarks:—"Let me tell nurserymen that if they would live and flourish in this age, THEY MUST BE correct. The fog that has been so long and so thick about their business, and that shielded them in the perpetration of many of their errors, is fast being dissipated. The time is coming, and indeed now is, when a good reputation in their business will be worth more than anything else. Not a reputation for *integrity of purpose* alone, but for that perfect knowledge and precaution and care *throughout,* that make mistakes almost impossible, from the getting of the sorts, down through all the changes and manipulations, to the last one of labelling and selling the trees."

Orchard of E. Phinney, Esq.

I have been highly gratified with the "Sketches" of the Lexington (Mass.) farm. But will you allow me to gratify my inquisitiveness, by asking the writer of these valuable sketches, one or two questions.

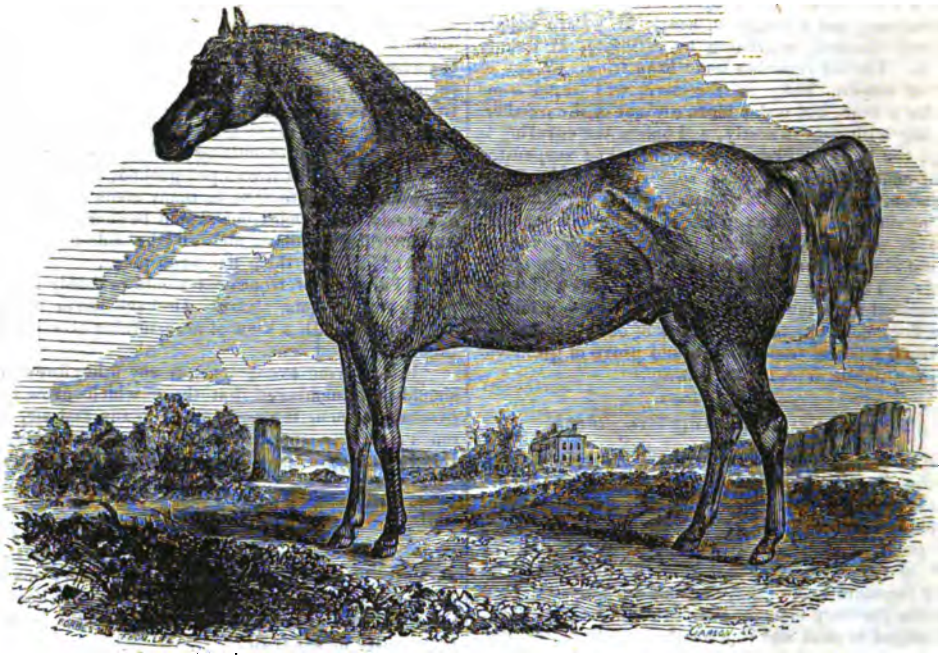
What are those "one or two varieties of sweet apples, which are worth all the rest?"

I think it is stated that the land around the trees is kept under constant cultivation. In this case, is it not necessary to place something around the trees to protect them from injury during the plowing, harrowing, &c.? If so, what kind of fixtures are found most efficient and economical? S. W.

The Scarlet-Flowering Currant.

The following fact, stated in a letter from DAVID THOMAS, will doubtless be interesting to all those who have cultivated this beautiful shrub, but from its tender character, have been compelled to give it winter protection:—

"*Ribes sanguineum* has proved entirely hardy in the south (shady) border, though it has always been tender where the rays of the sun could strike it when frozen. This is a fact worth knowing; and I can ascribe it to no other cause."



Morgan Hunter.

It has been well remarked that, though a picture may convey too favorable an idea of a defective animal, yet it is impossible to portray all the excellencies of a good one. Making due allowances for the latter difficulty, the above figure may be considered a correct likeness of the horse from which it was taken.

"Morgan Hunter" is six years old; was bred, as we are informed, by Mr. Exwell, of Springfield, Vt.; was got by Gifford Morgan, dam by the same horse.* He was sold by F. A. Wier, of Walpole, N. H., in May last, to Messrs. Ackley & Gilbert, of East Hamilton, Madison county, N. Y., and stands the present season, at the stable of S. A. Gilbert, in that town. He is a capital specimen of the Morgan family of horses. In his general form, he possesses in a remarkable degree, what Youatt lays down as the most important requisite in a stallion—*compactness*—"as much goodness and strength as possible, condensed in a little space." His head is fine, and his eye large and brilliant; his chest capacious, barrel round, loin very broad, back short, quarters long and muscular, flanks deep and full, limbs short-jointed, flat and sinewy. In temper and spirit, he exhibits the intelligence and docility, which characterise most of his near relatives. Like the high-mettled Arabian, he unites the playfulness and good humor of a pet lamb, with the courage and power of the war-horse,—whose 'neck is clothed with thunder,'—'who rejoiceth in his strength,' and 'mocketh at fear.'

The history of the Morgan stock of horses has been fully given in previous pages of *The Cultivator*. Some people, however, who have not fully investigated the matter, seem to entertain the idea, that they originated with a cross of the French or Canadian horse. We have never seen the least evidence that the original, or as he is called, the Justin Morgan horse, possessed any of this blood; and of the four stallions which were kept of his get, we believe the Bulrush or Chelsea Morgan, was the only one that inherited any French blood through the dam.

We notice various advertisements and cuts of horses, as "Morgans," in the papers of different parts of the country. A comparison of those descriptions and their originals, with the cut at the head of this article, may serve in some degree, to show whether the animals truly represent the stock whose name they bear, or are only counterfeits.

Pasterns of the Horse.

The following sensible remarks on the form of the pasterns, are copied from Youatt's work "*The Horse.*"

"In proportion to the obliquity or slanting of the pastern, will be the stress on the fetlock-joint, and, therefore, the liability of that joint to injury and strain; and also the liability to 'sprain of the back sinews,' from the increased action and play of the flexor tendons; and likewise to injuries of the pastern-joints, for the ligaments will be weak in proportion to their length. The long and slanting pastern is an excellency in the race-horse, from the springiness of action, and greater extent of s ride by which it is accompanied. A less degree of it is necessary in the hunter, who is to unite continuance of exertion with ease of pace, and who, in his leaps, requires almost as much springiness as the race-horse; but for the wear and tear of the hackney, a still less degree of obliquity should be found. There should be sufficient to give pleasantness of going, but not enough to endanger continuance and strength. Experience among horses will alone point out the most advantageous direction of the pastern, for the purpose required; but the slightest observation will prove the necessity of considerable variety in the structure of this part. Let the reader imagine the heavy dray-horse, with his short and upright pasterns, contending in the race; or the race-horse with his long and weak pasterns, endeavoring to dig his toe into the ground to move some heavy weight. The concussion is little in a cart-horse because his movements are slow, and therefore the upright and strong pastern is given to him, which he can force into the ground, and on which he can throw the whole of his immense weight."

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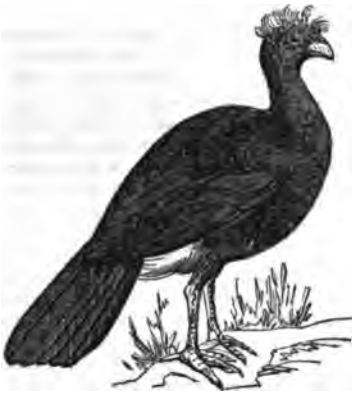
* For pedigree of Gifford Morgan, see Cult. for 1846, p 286

The Poultry Yard.

The Curassow.

It is probable that all our domestic birds, were some time or other, reclaimed from a wild state. Such we know to be the fact in regard to some of them. The turkey, for instance, was unknown on the Old Continent till after the discovery of America, where it was found only as an inhabitant of the forest. The common domestic goose has been traced to the European wild goose, and the common duck to the wild mallard.

In reference to the domestication of birds, the question has been asked—"Can we tame more of them?" Everyday's observation brings more or less evidence in favor of the affirmative of this question. The only point to be considered is, whether any birds that are susceptible of domestication, will prove useful; and even this must be finally determined by experiment, though we may be influenced by probabilities in making the attempt.



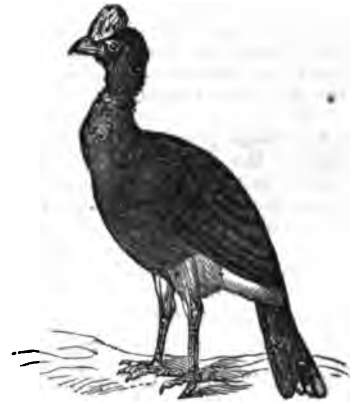
63—CRESTED CURASSOW.

The Curassows (*Cracidæ*) are included in the gallinaceous order. The family embraces several species, all of which are natives of Mexico and South America. We are informed that in parts of these countries, they have been long reclaimed, and a writer observes that "it is really surprising, considering the extreme familiarity of their manners, and the facility with which they pass from a state of nature to the tameness of domestic fowls, that they have not yet been introduced into the poultry yards of Europe." It is stated on the authority of Temminck, that they were once thoroughly acclimated in Holland, and were as prolific in their domestic state as any common domestic poultry; but that the establishment where they were kept, was broken up in the commotions which followed the French Revolution. Several of the species are described as of considerable size, of beautiful plumage; and their flesh is said to surpass in whiteness and delicacy of flavor, the common fowl and even the pheasant.

The figures herewith given are those of the crested *curassow* (fig. 63,) and *galeated curassow* (fig. 64.)

"The galeated curassow," says Martin, "equals a hen turkey in size; it is a native of the forests of Mexico, where it lives in large flocks, which frequent the branches of the tallest trees. It is said, however, to make its nest generally on the ground, a circumstance the more favorable for its naturalization as a domestic bird. The young are led about by the female, following her exactly in the same way as the chickens of the ordinary fowl, or of the pheasant or partridge, following their respective mothers, obedient to her call. At first the young feed principally on insects and their larvæ, such as those of ants, &c., which are everywhere abundant; by degrees they begin to feed on various seeds and fruits, much in the same way as does the young of the turkey, which bird, in many of its general habits, this species appears to resemble."

"The crested curassow equals, or rather excels, the preceding species in size, and is a very graceful and noble bird; it is a native of Mexico, Guiana, and Brazil, and in fact appears to have an extensive range over the warmer regions of the American continent. It abounds to such an extent in the woods of Guiana, that M. Sonnini regards it as one of the surest sources of supply on which a traveler penetrating the vast forests of that region, with his gun only, to which he must look for subsistence, may place his reliance. This bird congregates in numerous flocks, which are in general little disturbed by the intrusion of man into their haunts; indeed, so unsuspicious are they, that when their ranks have been thinned by the fowling-piece or rifle, the rest have remained quietly perched upon the trees, as if unconscious of the havoc committed amongst them. In the neighborhood of inhabited places, however, where their proximity to man, who is their most active persecutor, has taught them to fear him, they are far more wild, cautious and distrustful, and recede deeper into the recesses of the wood on the approach of the hunter, who nevertheless destroys them in great numbers. They build large rude nests on the branches of trees, constructing them of twigs and sticks, interlaced with stalks of herbaceous plants, and lining them with a bed of dried leaves and grass. According to Azara, the female lays eight eggs (Sonnini says five or six,) nearly as large as those of a turkey, but white and thick-shelled.



64—GALLEATED CURASSOW.

"In captivity, the crested curassow is gentle and familiar, and according to M. Ameshoff's experience in his vivarium, may be domesticated with very little trouble. The galeated curassow is a fine bird, but we think this species to be altogether more graceful; its beautiful forward-curled crest is an elegant ornament, it consists of velvety feathers, from two to three inches in length, and is capable of being raised or depressed, at pleasure. The eyes are surrounded by a naked skin, which extends to the cere. The general plumage is of a deep black, with a slight metallic gloss of green, the abdominal region being of a dull white."

Profits of Poultry.

EDS. CULTIVATOR—In looking over *The Cultivator*, I saw a number of accounts of the profits of keeping poultry; having kept an account myself the past year, I propose to add my experiment to the number. My account commences on the first of April, 1848, with thirty-three hens and two cocks, and is as follows:

Poultry establishment, Dr.	
To 35 fowls, at 37½ cents each,	$13 12½
22¾ bushels of corn,	13 93
Labor fixing hen-house,	50
Total expense, excluding labor of feeding,	$27 55½
Cr.	
By 2966 eggs,	$31 23
47 chickens,	7 67½
4 fowls used during the season,	1 16
31 fowls on hand, at 37½ cents each,	11 62½
Total receipt for the year,	$51 69
Deduct expenses,	27 55½
Leaving a balance of	$24 13½

On the 20th of May I shut them up in a shed adjoining the barn, letting them out an hour or two before sundown, each day, the principal object being to prevent their destroying a piece of corn near by. After the corn was out of danger, let them out at noon, that they might have more time to ramble round the farm, and pick up insects,—considering it necessary that they should have an abundance of animal food of some kind to ensure their laying well. The feed was all corn, at an average price of a little more than 60 cents per bushel. Most of the eggs were sold for about $1 per hundred. In July, there were some sold for 13 and 14 cents per dozen, and those sold in September and after, averaged about 14 cents. The chickens did unusually well,—not having lost more than half a dozen during the season; they were sold during the months of July and August, at from 30 to 33 cents per pair. James H. Ball. *Nassau, May* 14, 1849.

The Veterinary Department.

Cure for Heaves.

Mr. Philo Adams, of Huron, Ohio, sends us the following recipe for heaves in horses, which he says he has tried with the best effect:

In the first place, keep your horse on wet or chopped feed until the medicine takes effect, which from the time it was given will not be over two weeks, at the longest. Take one and a-half gills of angle or fish worms; wash them clean; drain the water from them, and put them in some vessel that can be covered tight. Put on the worms spirits of turpentine enough to kill them. Let them stand twenty-four hours; then put them in a bag, and tie them on the bits. Keep them in the horse's mouth, except when you want him to eat, till the contents of the bag have been swallowed. If the horse is not cured, or nearly so, in eight or ten days, give him another similar dose, which I think will effect an entire cure.

Important to Dairymen.

Eds. Cultivator—The experience of many a dairymen has taught him the necessity of a remedy for that obstinate disease, usually denominated "Horn-ail"—the symptoms and remedy of the disease are as follows:

Symptoms.—Cold horns, sudden falling off in quantity of milk; general appearance drooping; dull eyes, &c.

Remedy.—6 spoonsfull soot,
1 " black pepper, ground.
1 " ginger,
1 " salt,
3 eggs.

All well stirred together; add sufficient meal to make it convenient to handle in balls; draw out the tongue with one hand, and pass down one ball as far as practicable—let go the tongue, and hold up the nose till it is swallowed. In like manner give the rest.

The above dose repeat three or four mornings, and it will effect a cure.

The horns should have nothing done to them.

Should the above appear to the editors, of any avail to their numerous readers, they are at liberty to publish. It has saved me many valuable cows. M. S. Bailey. *Bouckville, Madison County*, 1849.

P. S. Cows hard to milk, may be rendered easy by squeezing the teat full of milk, and passing up a penknife blade three-fourths of an inch.

Neurotomy.

A question has arisen how far a horse that has undergone the operation of the division of the nerve of the leg, and has recovered from the lameness with which he was before affected, and stands his work well, may be considered sound. In our opinion, there cannot be a doubt about the matter. Does the operation of neurotomy render a horse as capable of work as he was before he became affected with the disease on account of which, and to relieve him from the torture of which, the nerve was divided? Is the operation of neurotomy so invariably followed by capability, and continued capability of ordinary and even extraordinary work, that they may readily be considered as cause and effect? The most strenuous defenders of the nerve operation cannot affirm this. They can only say that they partially succeed in almost every fair case,—that they perfectly succeed in the majority of cases; but they cannot deny that the horse will batter and bruise that foot, when he has lost sensation in it, which should have been tenderly used; that even the hoof will sometimes be lost, after operations performed with the greatest judgment; that the lameness will sometimes return after the animal has gone sound, one, two or three years; and that, after all, there is a little unpleasantness in the action of the horse, from the peculiar manner in which the foot meets the ground when its feeling is destroyed; and that the horse is more liable to accidents, for he will travel on without warning his rider of the evil, after a piece of glass has penetrated his foot, or a stone has insinuated itself between the sole and the shoe; and thus irreparable mischief will be done, before the cause of it can possibly be detected. A horse on whom this operation has been performed may be improved—may cease to be lame, may go well for many years; but there is no certainty of his continuing to do so, and he is unsound.—*Youatt.*

Warts.

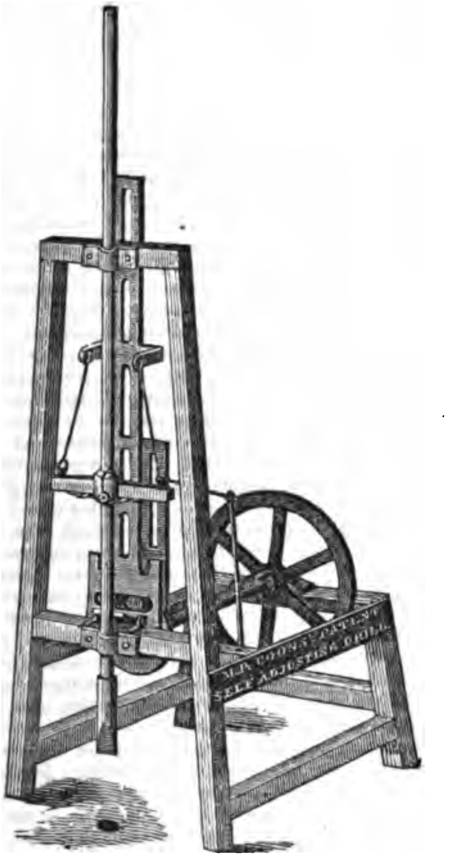
These are tumors of variable size, arising first from the cuticle, and afterwards connected with the true skin by means of the vessels which supply the growth of the tumors. They are found sometimes on the eyelids, on various parts of the skin, and on the prepuce. They must be removed by an operation. If the root be very small, it may be snipped asunder with a pair of scissors, close to the skin, and the root touched with the lunar caustic. If the pedicle or stem be somewhat larger, a ligature of waxed silk may be passed firmly round it, and tightened every day. The source of nutriment being thus cut off, the tumor will, in a few days, die and drop off. If they are large or in considerable clusters, it will be necessary to cast the horse, to cut them off close to the skin, and sear the root with a red-hot iron. Unless these precautions are used, the warts will speedily sprout again.—*Youatt.*

Hoe cabbages while the dew is on, and make hay while the sun shines.

The Farmer's Note-Book.

Coons' Patent Drilling Machine.

This machine is in many respects different from any before used for the same purpose. The inventor claims its superiority on account of its simplicity, cheapness, durability, portableness, and its capability of working a line of drills by the power of one man—the machine admitting any number of drill-shafts, and permitting the action of the drills within six inches of each other. Built on a large scale, it may be readily driven by horse, steam or water power. The original object of Mr. **Coons**, in the invention of this machine, was the advantage of its use in the erection of his patent fence, noticed in our last. A machine of proper size to drill the holes used in this kind of fence, will cost thirty to forty dollars, and will, it is stated, do the work of four hands, and in a more accurate manner than it can be done by hand labor.



65—COONS' PATENT DRILL.

Any further information in regard to this machine, may be had by addressing M. P. **Coons**, Lansingburgh.

Potatoes vs. Corn.

Eds. Cultivator—I noticed, in perusing the May number of your periodical, a piece entitled "Potatoes exhaust the soil," with which I cannot agree. In fact, my experience does not coincide with that of the article mentioned. Five years ago I planted a piece of ground with corn and potatoes; manured the whole at the same time. and distributed it as equally as possible. The next year, sowed it with oats, and as I was in the field one day, I looked at them to see how they were growing, and noticed quite a difference in them. The oats, where I had taken off the potatoes the year previous, were at least one-third larger than where I had taken off the corn. The next year I mowed the piece, and there was quite as much difference as with the oats, and it is plainly to be seen to this day. Since that time I have taken notice, and have found the effect to be similar. Now how can this difference be accounted for, if corn is not a greater exhauster of the soil than potatoes?

If what our friend stated be true, (which I doubt not,) it must be that these crops operate very differently on different soils.

I wish some of your numerous correspondents who have made observations, would give us the result of their experience in this particular. A. K. *Hartford, May* 18, 1849.

The Farmer's Vocation.

Eds. Cultivator—Those that obtain an 'honest living' by whatever means employed, are entitled to respect. All trades, occupations and professions, have their advocates and followers, and it is no part of our business to institute invidious comparisons as to which is the most respectable. As farmers, we have no reason to be ashamed or to think lightly of our vocation. Though we may be obliged to obtain our living by the 'sweat of our brow,' it need not lessen our independence or enjoyment. We are not obliged to bow to kings or despots for our daily bread; nor wait the capricious will of another, to receive the reward of our labors.

Not many years ago, there seemed to be a disposition among farmers' boys to leave the farm and engage in mechanical, mercantile and professional pursuits. Then farming was not looked upon in the same light that it is now, being considered an employment that needed little knowledge; one, which those the most ignorant, or those of the feeblest intellect might pursue advantageously. Since then, "a great change has been going on in the public mind" in regard to it. It is becoming better understood and appreciated. Agricultural journals have called attention to the importance of agricultural pursuits, and political, scientific and even literary periodicals have lent their aid to advance the interests of the farmer. Now, men holding the most exalted positions, in government, in theology, in science, or in literature, may engage in agricultural occupations, without compromising in the least, their dignity or respectability.

To engage in farming understandingly and successfully, requires mechanical skill, intellectual action, and scientific knowledge.

Mechanical knowledge implies the use of tools. This is an important branch of husbandry, for it requires as much skill to guide a plow or swing a scythe rightly, as it does to use a plane or trowel. This knowledge in farmers is not intuitive; it must be learned. Farming is practical business, and practice in the use of tools is the only way to become skillful in using them. In this respect, farming is a trade, and requires mechanical skill.

Farming requires intellectual effort. In the management of a farm, there must be thought and calculation. Even if a person works alone, he must think. He should study to know the best means adapted to the end in view. It may seem easy enough to know the proper time to sow, plant, or harvest, but to do these things in the best time and way, is difficult. And so of all the work of a farm. There is a great difference between going to work understandingly, and at hap-hazard, thinking nothing of the circumstances. True it is that like causes acting under like circumstances, produce like effects; but here, circumstances differ so much between cause and effect, in each separate instance, that they must be scanned closely in order to obtain even an approximate knowledge of the result. A lawyer must learn fully, the case of his client, and a physician must examine closely his patient, to know how to act, so a farmer should study his business to know how to direct his labors.

A farmer should be well informed. Not only acquainted with the various modes of cultivation in his own vicinity, but as much as possible, with that of the different parts of his own country, and of all other countries. To do this, need not *cost* a great deal in this age of cheap reading. The multiplicity of publications and periodicals adapted to his wants, so cheap withal, renders him without excuse, if he is not constantly adding to his stock of information. In the 'good time coming,' it will undoubtedly be necessary that the farmer not only be well informed, but *educated*.

It is also important that the farmer should have some knowledge of chemical science. He has to do with nature, and in her operations, from the reviving of vegetable life in spring, to the ripening of the last fruits of autumn, chemical changes are constantly taking place. The elements of the soil enter into new combinations in all that grows out of the earth. These elements and their combinations should be understood. If a soil is fertile or sterile, it should be known why it is so. If a crop fails, it should be known what ingredients of soil were necessary to perfect it. The 'whys and wherefores' of all this are generally guessed at; if we guess right, well and good; if wrong, we must make the best of it. How much better is it to *know*, than to have unsatisfactory opinions of the relation between cause and effect in the processes by which Nature accomplishes her purposes. Farming *is* a science, and a theoretical knowledge of chemistry is of great advantage in conducting its operations successfully.

'All honor to the toiling hand,' but more especially to him who discovers means to advance agricultural interests, or to increase agricultural knowledge. W. L. Eaton. *East Weare, N. H., May*, 1849.

Driving Swine.

Eds. Cultivator—An article in the February No. of *The Cultivator*, on "*removing swine*," suggested the propriety of sending to you for publication, my method of removing swine, *on foot*.

Swine are, proverbially, a most untractable and contrary animal; and are not a little akin to some bipeds of the human species in this respect, whom we must attempt to drive in an opposite direction, in order to get them where we would have them.

When I wish to drive a hog—if I wish to do it *easily, expeditiously*, and with the *greatest safety*—(for I have often seen hogs dogged and beaten, in a most unmerciful and cruel manner, and all to no purpose)—no matter how large they are, I tie a small rope around one of their hind legs, while they are eating, at their trough; and then let them jump: in a few moments they will be as manageable as an ox with a ring in his nose, and may be driven where we will. With a rope around his leg, a hog may be driven much sooner and with less effort, than a score of men, boys and dogs could drive him with all their whips and clubs. Sows with pig may be removed in this way, where the distance is short; and thereby avoid all danger of injuring them in a contrary chase, of which there would be much danger, if they were not disposed to be driven quietly.

This mode of operating would, without doubt, prove quite as efficient in driving any other animal, that was not accustomed to be led. Let it be tested. S. Edw'ds Todd. *Lake Ridge, Tompkins Co.*, 1849.

A Cultivator and "The Culivator."

Eds. Cultivator—A cultivator for the soil, is used with universal benefit. Some soils, however, will receive more benefit from its frequent use than others. Light soils lose nearly as much, when used too frequently, in the escape of gases, as they gain from stirring the ground, killing the weeds, &c. This loss might be avoided, by the addition of a small roller immediately behind the cultivator, and attached to it, to slightly press the surface, which will prevent any increase of evaporation—a source of more loss, particularly in light soils, than leaching.

"The Cultivator" for the mind, may be used with equal success. Should it cause, in some minds, a tendency towards a superabundance of theory, let the soil be rolled or pressed by a little bodily labor. Experience will tighten up the surface, and prevent any loss except by *leaching*, which never can be increased by "The Cultivator." Stirring the soil is probably the principal benefit derived from the use of a cultivator; therefore, everything in the way of its frequent use should be removed if possible, that it may be applied oftener than the killing of weeds might require.

All may observe, who will try the experiment, the difference in a field of corn, where a cultivator has been through one part four times, and another twice; but the difference is frequently attributed to some other cause, or accidental combination of causes; it being difficult to comprehend how the mere stirring the soil between the hills could change the colour and growth of the crop to such an extent. When we consider the attraction existing between the roots of plants and their nourishment, through the medium of innumerable spongioles, whose office is to search after, select and suck up such materials as are fitted for their use, we shall see that the loosening of the soil facilitates their approach to particles of nourishment that would otherwise be unattainable, while the motion of the soil admits more freely the approach of the attracted particles. This may be illustrated by mixing fine steel filings with sand, spread upon a table, with a magnet in the midst, and stirring the mixture in any way, or jarring the table by striking on it, the steel filings will be seen to approach the magnet every time their repose is disturbed, while all other particles in the mixture will be as liable to recede as approach.

There is something striking in the comparison between a cultivator for the soil, and "The Cultivator" for the mind; but there is a difference: while the one kills the weeds, and puts in motion the soil, thereby facilitating the approach of the roots and their nourishment, the other not only fills the place of idle speculations, puts the mind in motion, and while it facilitates the approach of nourishment from other sources, actually furnishes some of the most essential ingredients for the strongest growth.

As the earth may be cultivated more successfully by the application of a properly cultivated mind, so the mind may be fertilized by contemplating the causes and effects of a well cultivated soil. "To him that hath, shall be given," is written by divine inspiration, and copied by Nature into every well cultivated field, as God's truth. The soil that sends forth the most luxurious growth is assisted most with nourishment afforded by the atmosphere. That every plant depends more or less upon the atmosphere for sustenance, is universally admitted. That most plants draw a large share of their support from it, is also evident, from the result of numerous experiments. As the greater growth of root extracts more from the soil, so the more luxuriant the leaf, the greater the capacity to draw from the atmosphere. When you add fertility to the soil, by manuring and by judicious cultivation, so as to increase the growth of your crop, you place yourself in the situation of him that hath, whereby you will receive, not only the advantages of a more retentive soil, but the fertilizing qualities in the atmosphere, which perhaps have floated over many barren and badly cultivated fields, where the crops had not the surface of leaf or strength of constitution to attract them. Thus, you not only receive the increase of your two or five talents, but that which is taken from him that hath not. Such are some of the inducements held out to the farmer, "to improve the soil and the mind." DEAN. *Lyonsdale, February*, 1849.

Transmutation.

The notion of the transmutation of wheat into chess, is not yet quite extinct. The editor of the *Michigan Farmer* cautions his readers against the attempt to raise wheat on wet land, because, he says, "*if the plant survive, it will be more likely to be chess than wheat.*" He declares his readiness and ability to maintain his "position," that wheat will change to chess, by "incontrovertible facts;" and adding a word of lamentation on the "blindness and inconsistency of poor human nature," he goes on to state that—"The men who maintain that wheat never degenerates into chess, generally undertake to sustain their position by theoretic reasonings, in opposition to the most undoubted facts before their eyes; and yet these are the very men, generally speaking, who rant against book-farming, because, they say, it consists in visionary theories, regardless of practical experience"!! The article concludes by reiterating the assertion, that—"the doctrine of transmutation may be triumphantly sustained."

The obstacles to the successful culture of wheat on wet ground are sufficiently numerous, without adding the fear of transmutation. The idea, however, is new to us, that—"the men who maintain that wheat never degenerates into chess, are the very men, generally speaking, who rant against book-farming"! But we hope our friend will favor the public, as soon as practicable, with his "incontrovertible facts," in proof of transmutation; for we have never seen any such proof. The doctrine has been long asserted, and to its advocates belongs the duty of demonstrating its truth. It is contended that wheat, under certain circumstances, is converted into chess; and if it is so, we do not see why the fact may not be clearly established. For instance, take a quantity of earth, suitable for the growth of wheat, and subject it to such a degree of heat as will be sure to destroy the vitality of any seeds it may contain; put the earth in pots of suitable size, and sow a certain number of wheat grains in each; note the number which come up. Subject the plants to the process deemed most likely to cause transmutation.

It is an original law of nature, that the earth shall bring "forth grass and herb, yielding seed after its kind." [Gen. i, 12,] and the transmutation of a plant into another, of a distinct genus, is so great a deviation from this law, that nothing short of the most unequivocal and positive evidence can warrant its belief.

We notice that the *Berkshire Culturist* hints at a "solution of the chess difficulty," on the ground of *cross-impregnation*. A correspondent of that paper gives some instances of the intermixture of different kinds of beans; and the editor, in commenting on the circumstance, relates similar instances of the mixture of different kinds of Indian corn. We see nothing particularly striking or unusual in the cases cited; certainly, they fall very far short of touching the point under consideration,—the mixture of wheat and chess. If the "scarlet runners" (beans.) had mixed with peas, or the Indian corn with wheat, there would have been something more analogous to the supposed mixture of wheat and chess. But the mixture mentioned, was with plants of similar varieties, belonging to the same species. Wheat (*Triticum*) and chess (*Bromus*) are not only different species, but of different genera,—as much so as wheat and oats, or wheat and Indian corn. When it is proved that these hybridize, we will admit, with our friend of the *Culturist*, that "the subject is worth examination."

But hybrids, whether plants or animals, show traits of their diverse parentage. Nothing of this kind is exhibited by chess. We have never seen or heard of any special variation in the species (*B. secalinus*,) to which it is alleged wheat changes; and there is no reason to doubt that it has produced "seed after its kind" from the beginning.

No Protection to Crows.

EDS. CULTIVATOR—The New-York *Farmer and Mechanic*, contained an article copied from a Massachusetts agricultural paper, headed "Protection to Crows," in which the writer asserts that crows are a benefit instead of injury, to the farmer; that they do more good by destroying worms and insects, than injury in pulling up corn; that soaking corn in tar-water and rolling it in plaster, will prevent crows from pulling up corn. I know by experience, that corn thus prepared is not always secure from the attacks of crows; true, they will not eat much of it; but they will pull a hill here, and a hill there, in hopes of finding the pure article, until a large portion of the corn is pulled up.

Twine, stretched around the corn field and several times across it, is the method generally adopted by the farmers in this neighborhood to protect their corn-fields from crows, and it rarely if ever fails to be effectual. But the damage done to our corn-fields, is but a small part of the sum total of the injury that we have to suffer from these rascally depredators. I am their decided enemy, and believe them to be the most mischievous and thievish of the feathered race. They destroy our eggs, chickens, young turkeys, and sometimes even venture to attack young lambs, which they soon kill by plucking out their eyes—however they rarely, in this section, kill lambs, except when these animals are enfeebled by cold storms, and lie in fields or woods remote from the house. When hens or turkeys have nests a little distance from the house or barn, I have known them to watch until the hen or turkey left the nest, and then seize the egg and away.

Two years ago, the spring was far advanced, and I could not find the nest of an old hen turkey. After many fruitless searches, one morning I missed her, and after hunting a short time, saw an old crow perched on the highest of a group of fruit trees, (about twenty rods from the house,) beneath which was the turkey on a nest, among the high grass in one corner of the fence. Thinks I—"old crow, you don't get these eggs." I went to the house, watched to see the turkey leave the nest. At last I saw her coming towards the house, and started to get the eggs, when the crow, although I was in full sight, and halloed, flew into the nest, siezed the newly laid egg, and flew away. The nest was empty. To carry eggs, they thrust their bills into them. Their destruction of the eggs of birds is great, especially of those species which build open nests. In western New-York during the last few years, crows have increased, while many other species of birds have become rare. The American Robin, Ferruginous Thrush Cat-Bird, and many others are seldom seen; while many species, as if to avoid the crows, build their nests among the trees and shrubbery near dwellings, both in the village and country, where the crows dare not come. The birds' eggs and young birds destroyed by crows, would, if suffered to live, do vastly more good in the destruction of worms and insects, than crows, besides enlivening the country with their presence, and cheering it with their songs. The crows have not a redeeming quality that renders them entitled to be saved. They are almost universally obnoxious to the agricultural community, and various are the methods employed to destroy them. They know enough to avoid the marksman, and are rarely shot. The most effectual way to destroy them, is to steep corn in hellebore or strychnine, and strew it around some dead carcass in the winter season. The carcass should be in some field or woods, out of the way of domestic fowls or animals. The late severe winter propably destroyed many crows, since they are less numerous than usual this spring.

The American crow has been supposed to be identical with the common carrion crow of Europe, but it is now considered by ornithologists to be different, from its smaller size, shape of its tongue, gregarious habits and voice. It is also much more timid and fearful of man. Nuttall says that the European crow is so familiar and audacious in some parts of the Levant, that it will frequent the courts of houses and like a harpy alight boldly on the dishes, as the servants are carrying in the dinner, and carry off the meat, if not driven away by blows. S. B. Buckley. *West Dresden, Yates Co., N. Y., May*, 1849.

Catching Red Squirrels.

Eds. Cultivator—There have been in *The Cultivator*, several modes recommended for the destruction of rats and mice—those vexatious destroyers of the farmers' grain; but nothing has been said, with regard to the destruction of *red squirrels*, which find their way into the corn crib, however securely it may be guarded against the entrance of rats and mice. Every one who is acquainted with these little marauders, knows too well how readily he will gnaw a hole through the barn roof, or into the granary; and how frequently is it the case that they enter the domicil of the farmer and plunder the precious fruits, "which autumn richly pours"—chestnuts, hickory nuts, butternuts, &c., which had been safely stored for use, during the long and pleasant evenings of winter. Where they are so numerous as they have been in this region the past few seasons, their destruction is an object, as worthy the attention of the farmer, as the destruction of any other animal, which wastes and destroys the fruits of the farmer's industry. One red squirrel, permitted to live about a barn, or corn crib, will destroy more grain than two rats; besides the injury they are liable to do to the building by gnawing holes in the roof or the ceiling. As they are always so quick and shy in committing their depredations, and as we cannot always avail ourselves of an opportunity of demolishing them with "*Mexican grape*," and as they are not readily caught in common traps, I have practiced a more expeditious and *funny* mode of capturing them—which will be sport for boys.

Unlike the black and the gray squirrels, which seldom or never seek a refuge in a hole in the rails of a fence, when pursued, the red squirrel searches out all such hiding places in the fences where he is accustomed to run—as if to seek places of safety and concealment, when pursued by the sportsman. Although they are bold in approaching places, where the black and the gray squirrel dare not make their appearance, still they are exceedingly suspicious and shy of anything which has the appearance of a trap. Taking advantage of their remarkable propensity to run into holes, I lay a pump-log, or a bark which has rolled together, or anything which has a hole in it large enough for them to enter, upon the fence; and as the dog or anything else chases them along, they will take refuge in this *trap*. Then if I wish to take them alive, I hold a bag over one end, and punch them out with a pole. Sportsman.

Preservation of Grain.

The report on the Breadstuffs of the United States, made to the Commissioner of Patents, by Lewis C. Beck, M. D., contains many facts worthy of special attention. The remarks in regard to the preservation of grain, exhibit in a striking light, the necessity and advantage of adopting some artificial mode of drying. The losses which are sustained from the souring of flour, and the chemical changes in breadstuffs, by internal moisture, is estimated at from $3,000,000 to $5,000,000 annually. The practice of shipping grain in bulk is considered the cause of much injury.

The remedy proposed, is the removal of a portion of the water naturally contained in flour and grain. But the process of drying requires great care. In regard to ordinary kiln drying, it is observed:—"The passage of the grain or flour, however rapidly, over highly heated surfaces is apt to scorch, and thus give them an unpleasant flavor. From the rapid evolution of the moisture in the form of steam by the heat thus applied, unless proper ventilation be also secured, further injury will probably result. The steam again condensing into water, upon the cooling of the flour, may accumulate in particular parts of the mass operated on, and, thus, perhaps, render it at least equally liable to injury as it would have been without the employment of this process."

The report further observes that "in those samples of wheat flour that have been exposed to a degree of heat high enough to expel all the water, the gluten is less tough and elastic—a proof that its quality has been impaired. It is probable that the proportions of dextrine and glucose may thus also be increased at the expense of the starch. Under these circumstances, a subsequent exposure to moisture and a slight elevation of temperature, establishes the lactic acid fermentation, which, I suppose, is the chief cause of the *souring* of flour."

Mr. J. R. Stafford's process of steam-drying, of which we have several times spoken, is thus noticed:

"The advantages to be derived from artificial drying, are more fully attained by the invention patented by Mr. J. R. Stafford, in 1847, than by any other plan with which I am acquainted. It is based upon the process for drying organic bodies usually adopted in the laboratory. The grain or flour is brought into contact with a surface of metal heated by steam, and a due degree of ventilation, so important to the completion of the drying, is secured. As the heat is not raised above that of boiling water, there is no danger of injuring the quality, color, or flavor of the substances subjected to its action. The heat is, moreover, uniform, and the expense is said to be less than that of the mode of drying heretofore generally adopted. By Mr. Stafford's apparatus, 16 or 17 pounds of water are expelled from each barrel of flour; this reduces the proportion of water to four or five per cent., an amount too small to be productive of injury. Absolute dryness cannot be easily attained except by a long exposure of the flour to the heat, and it is not required for its preservation; a reduction of the amount of water to the small per centage just stated, has been found to be amply sufficient to secure this object. I cannot, in my opinion, render a more important service to dealers in breadstuffs, than to recommend strongly the employment of this or a similar process of drying."

The grain and flour should be packed in clean and tight barrels, and kept without unnecessary exposure to the air.

Since the above was put in type, we have received a letter from Mr. Stafford, stating that during the past year there have been but few shipments to England, of meal dried by his process, and none of corn: that Messrs.

Allen & Whittlesy, and Messrs. Gibson, Shotwell & Co., of New-York, have made some shipments of meal, and that the parcels have brought from one shilling to two shillings more per barrel than any other dried meal in market. Mr. S. further states that the reason why there has not been more meal sent abroad, is, that the home and Canada demand has been so great as to take all that has been made by the machines now in operation. Much of that which has gone to Canada, is said to have found its way to the West Indies and South America. Mr. S. says the price of the meal sent to New-York has been from two to three shillings per barrel more than the Jersey or Brandywine meal.

English Turneps.

It has been a Yankee maxim, from the days of the Pilgrim fathers, that—"turneps should be sown on the 25th of July, let the weather be wet or dry." The common English flat turnep will usually do well, if sown on proper soil, any time from the 20th of July to the 10th of August. They may not yield so largely as when sown somewhat earlier, but the roots will be sweeter, and will keep better.

The white turnep is not a very nutritive vegetable; but as it may be grown on lands from which a crop of hay or grain has been taken, the same season—is a good *fallow* crop, leaving the ground in good condition—and is useful in feeding sheep, cows or young stock, in the early part of winter, it may be made a profitable crop, in many instances. The grass or grain stubble may be plowed in, and a dressing of fine manure, compost or ashes, spread and harrowed in. The seed may be sown with a seed-drill,—the quantity varying from one pound to two pounds per acre. If the seed vegetates well, and the young plants are not attacked by insects, a pound to the acre will give a "good stand"—the rows being twenty inches apart,—but there is more certainty in the use of a greater quantity, and to guard against emergencies, it is better to use plenty of seed. After the plants have got well into "rough leaf," and are secure from injury by the fly, they should be thinned to the distance of six to eight inches in the rows; and the ground should be kept clean by the harrow, cultivator and hoe.

Cement for Cellars.

EDS. CULTIVATOR—A cellar may be made dry without draining, by means of *good* masonry; that is, if both materials and workmanship are of the best kinds for that purpose. The excavation being made to any depth required, and wide enough to allow the walls to be faced on both sides, let the foundation be laid with at least six inches of concrete, in two layers of three inches each; the first left to *set*, so as not to be easily disturbed before laying the second.

The concrete to be made as follows: Take any kind of sound durable stone, and break it as is done for McAdamised roads; the largest pieces to be no larger than a pullet's egg, and the smallest the size of an acorn. Take, also, of the best water lime, or cement, one part, and of sharp sand, perfectly free from mud or loam, three parts, and in a tight mortar box, without water, incorporate thoroughly the cement and sand, until every grain of the sand be separately rolled in the cement. Then add water to make it mortar, which must be thoroughly tempered, so that if it be kept to stand a while, no water shall collect in any depression left on the surface of the heap, which is the best test, perhaps, of its being sufficiently worked, while at the same time it is sufficiently moist to be pliant with the trowel.

The broken stone is now to be mixed with the mortar, in such quantity as will leave each piece of stone fairly embedded in the mortar, and as much stone as possible with that provision. It is then with dispatch to be laid down in the foundation, as already directed, and of such width as to project a little on each side of the thickness of the wall, and, of course, around the whole cellar.

The floor will be of the same material, and is to be done in the same way, the whole of each layer to be well beaten down and compacted with the back of a shovel; and, at last, all to be finished with a thin coat of the cement mortar. The floor, however, need not be laid until all the other work is complete. On the foundation, as described, the walls are to be built, with equal care, of stones and mortar, made of one part of cement and three of sand. Every crevice must be perfectly filled with mortar, and the stones so completely bedded and pointed as that no one piece may touch another.

As Mr. Johnston says about draining, the true way to go about this kind of work, is to go at it as though it was to "cost nothing," and there will be satisfaction in the end.

In making the concrete, the broken stone should be perfectly free from dust and dirt of every kind; and unless it is clean, should be washed. If inland sand is quite clean, it is better than lake sand,—the latter being rounded by the rubbing of the particles against each other, caused by the motion of the water.

There should be no quick-lime used; it has a tendency to slack longer than people think for, and prevents the cohesion of the cement.

Frost will not injure it if once fairly set; but that also requires time, and it should be protected by some nonconducting substance on the ground, and as high as the walls outside, for at least one winter; and the work should be all completed before the frost comes.

Very good cement can be had in Buffalo. I do not remember the maker's name, but I think the place was called Avon; and I think the merchant was Daw. It cost $1.75 per barrel some years ago. W. S. *Ellicottville, May* 25, 1849.

Wire Fences.

EDS. CULTIVATOR—I was much interested with a late article in your excellent journal from H. V. L., on the subject of Wire fence. There are many who, like myself have never seen such a fence, and would like a little further information. What is the mode of fastening the wires at the end of the fence? What means are used to tighten the wires, and is there not danger of their breaking in winter from the effects of frost, unless they are loosened? Boring holes in the posts, while it is attended with considerable labor, must tend to weaken them, if not to hasten their decay.

Why might not small staples driven into the posts to confine the wires, answer well instead of holes?

Would wires 5 inches apart, and 20 feet between posts, make an efficient *sheep* fence? If not, why might not smaller wires (say No. 16) be placed between the larger ones. Will those who understand these matters, be so kind as to give us a little "more light." S W.

Sheltering Sheep.

EDS. CULTIVATOR—Permit me to call the attention of farmers in Ohio and other sections of the country, to the importance of providing shelter for sheep and other domestic animals. I have had some experience in keeping sheep at stacks, exposed to the drizzling rains and sudden changes of the weather during the winter season. In the winter of 1847—8, I put one hundred to stack, and gave them plenty of hay and some grain through the winter. The loss was over 20 per cent. I have no doubt they ate a fourth more than the same number that were protected, of which the loss was only two per cent. In consequence of this result, I built ample sheds during the past summer, provided with hay-lofts—one 60 by 20, and another 55 by 20 feet. (I will just observe for the benefit of those who are building sheds of this kind, that 24 feet is about the proper width, and the additional expense of four feet is trifling.) These sheds are set to two barns, and enclose the yard on three sides. Here, in separate divisions, I have kept my sheep the past winter. They had good hay and plenty of water, and the yards were strawed three times a week. I feed some grain to my lambs in winter, and give some to ewes in spring. My loss up to this time (April 15th,) is half of one per cent. Many of my sheep were in low condition in the fall, yet I would like to compare them with any flock of the same number, that have had no protection. E. HALLEY. *Cleveland, Ohio, April*, 1849.

Legislative Aid to Agriculture.

EDS. CULTIVATOR—I wish to make some inquiry in regard to the money raised by the legislature for distribution to agricultural societies. I am informed by our late representative, that the money designed for counties which have no organized agricultural society, still lies in the State treasury. I find by referring to the *Transactions* of the State Society for 1847, that there were but forty-one county reports; and it is probable many of these societies were not organized for several years after the appropriations were made. It appears to me that some legislative action should be taken at an early day, in reference to this matter. In relation to those counties where there are no organised agricultural societies, and where the people are unwilling to organize, it seems to me that there would be nothing wrong in taking their quota of the money which now lies idle, or is used for other purposes, and distribute it among the counties where there are such societies. I have no doubt that this course would cause the formation of societies in several counties, and would be the means of doing much good. LOTAN SMITH. *Fallsburgh, N. Y., May*, 1849.

Agricultural Chemistry.

WE have been furnished by Mr. J. H. SALISBURY with the following account, prepared by him for the *Transactions* of the New-York State Agricultural Society, of some investigations connected with the composition of the tomato, and the fruit of the egg-plant. These investigations are interesting from being mostly in a new field, and as relating to substances which are coming more or less into use as edibles.—EDS.

The tomato and the egg-plant belong to the order Solanacea—the *potato tribe*. The properties of many of the plants of this order are very interesting and important. Many of its families contain a powerful narcotic principle, which renders the herbage, and generally the fruit, very poisonous. A number of these bodies are among the most active medicines: as *belladona, henbane, stramonium*, &c.

Among the species of the Solanum family, a number are cultivated for the palatable and nutricious food which some parts of the plant furnish, while others are highly valued as furnishing some active principles used in medicine. Those of the former class most highly esteemed, are the potato, tomato, and egg-plant.

The part of the plant eaten, when mature, is generally free from any deleterious qualities; although the herbage of the potato plant, and especially the young sprouts, contain a poisonous body,—a vegetable alkali called solania. The herbage of the tomato and egg-plant probably are also pervaded by a poisonous principle, though I do not know as this has as yet been actually demonstrated.

TOMATO OR LOVE APPLE.—(*Solanum lycopersicum.*) This, like the potato, grows wild in South America, and is supposed to be indigenous to that country. It was introduced into notice in 1796, soon after the potato. It has been cultivated and used for a long time in Europe, and for some time in the southern states; yet its introduction into the northern and eastern states is of a comparatively recent date. The extent to which it is now cultivated is sufficient evidence of the high esteem in which it is held. Of the numerous forms in which it is used, it is quite unnecessary here to speak.

There are two distinct varieties in cultivation, the *red-fruited* and the *yellow-fruited*. Of each of these there are several sub-varieties, the principal of which are: Of the red—the *common large-lobed*, the *small*, the *pear-shaped*, and the *cherry-shaped;* of the *yellow*—the *large-yellow*, the *small*, the *pear-shaped*, and the *cherry-shaped*.

The fruit of one of the red sorts was examined by M. M. Fodere and Hecht,* who give the following bodies as the result of their investigation:

1. An acid seemingly peculiar. It is destroyed by distilling heat. In the berries, it is probably combined with a bitter matter, thought to be solania.

2. A volatile oil, difficult to separate, and which evaporates with great rapidity.

3. An extracto-resinous brown matter, of a pitchy consistency, having a strong smell, a bitter-sweet taste, soluble in water, and partly soluble in alcohol and ether.

4. An albuminous matter, which readily putrifies.

5. A little mucous sugar, detected by the smell of caromel at the commencement of combustion.

6. Sulphate of potash, a little chloride of potassium and calcium, pure potash, and probably a vegetable alkaloid, which resides much more abundantly in the leaves of the plant.

This examination was made some years ago, when the methods of analysis were less perfect than at present. If solania exists in the berries, its amount must be very small, as the raw fruit is often eaten in large quantities without any bad results; in fact, the effects are considered beneficial rather than otherwise.

The kind here examined was a very fine seedling from the *large red*, raised and furnished by Mr. RATHBONE, of Kenwood, Albany. The fruit only was analysed.

Percentage of water, dry matter and ash.

335.8 grains of the fresh fruit gave, of

		Per centum.
Water,	318.20	94.758
Dry matter,	17.60	5.242
Ash,	1.12	0.334
Ash calculated on the dry matter,	....	6.372

The above shows that there is but little over 5 per cent. of dry matter, and 94 per cent. of water, in the fruit. The ash is highly deliquescent.

Composition of the ash.

Carbonic acid,	11.050
Silicic acid,	1.775
Sulphuric acid,	1.790
Phosphoric acid and peroxide of iron,	24.075
Lime,	0.075
Magnesia,	1.610
Potash,	20.805
Soda,	25.535
Sodium,	2.790
Chlorine,	4.245

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* Journal de Pharmacie, xviii, 106.

Organic acid,	4.550
	98.250

The phosphoric acid, potash and soda, make up about 70 per cent. of the ash.

Proximate organic composition.

		Calculated without the water
Sugar and extract, with tartaric, citric and malic acids,	3.320	59.064
Albumen,	0.210	3.736
Casein,	0.207	3.682
Dextrine or gum,	0.547	9.732
Fibre, with the coloring matter,	1.010	17.968
Matter separated from the fibre by a weak solution of potash,	0.327	5.818
	5.621	100.000
Water,	94.758	
	100.379	

Besides the bodies given in the above analysis, it contains a small quantity of volatile oil.

The matter separated from the fibre by a weak solution of caustic potash, gave the characteristic color of albumen with sulphuric acid. Three acids were noticed in the tomato, which resemble tartaric, citric and malic. These acids were not quantitatively determined. From the qualitative examination, the citric acid appeared to exist in the largest proportion. This investigation was commenced so late in the season, that it was impossible to get good fruit enough to extend the inquiry as far as it would have been desirable. The subject will be resumed at the earliest opportunity, for the purpose of examining more fully these acids and the coloring matter.

Amount of the several bodies, organic and inorganic, in 1000 *lbs. of fresh tomatoes.* Calculated from the foregoing analysis.

	Expressed in lbs. and decimals of a lb.
Carbonic acid,	0.3817
Silicic acid,	0.0606
Phosphoric acid and peroxide of iron,	0.8401
Sulphuric acid,	0.0611
Lime,	0.0026
Magnesia,	0.0549
Potash,	0.7191
Soda,	0.8899
Sodium,	0.0952
Chlorine,	0.1472
Organic acids,	0.1576
Amount of ash in 1000 lbs.,	3.4100
Sugar and extract, with tartaric, citric and malic acids,	28.9480
Albumen,	1.8310
Casein,	1.8050
Dextrine or gum,	4.7690
Fibre with coloring matter,	8.8060
Matter separated from fibre by a weak solution of potash,	2.8510
Proximate organic bodies in 1000 lbs.,	49.0100
Water,	947.5800
Total,	1000.lbs.

Egg Plant.—*Solanum melongena.*—The egg plant is a native of Africa. It was introduced into Europe in 1797, soon after the tomato. It is a tender annual, requiring a warmer and longer season to mature in than the plant previously described. It is highly esteemed for the general purposes to which the tomato is applied; but it is less cultivated than that plant in the Northern and Eastern States, owing probably in part to the short time that has elapsed since it was first brought into general notice in this section, and in part to the difficulties attending its cultivation.

The varieties generally grown are the *oval-shaped purple*, the *globular-shaped purple*, the *oval-shaped white*, and the *globular-shaped white*.

The only part of the plant analysed was the fruit, which was a fine specimen of the *oval-shaped purple*, raised and furnished by Mr. Rathbone, of Kenwood, Albany. Its longitudinal diameter was ten inches, and its transverse diameter six inches. It was in the proper state for cooking.

Percentage of water, dry matter, and ash.

275 grains gave of

		Per centum.
Water,	251.22	91.353
Dry matter,	23.78	8.647
Ash,	1.66	0.604
Percentage of ash calculated on the dry matter,		6.981

Composition of the ash.

Carbonic acid,	4.725
Silicic acid,	1.700
Sulphuric acid,	4.740
Phosphoric acid and peroxide of iron,	28.775
Lime,	0.075
Magnesia,	1.370
Potash,	20.510
Soda,	31.970
Sodium,	1.135
Chlorine,	1.730
Organic acids,	2.200
	98.930

Water constitutes a large proportion of the fruit,—about 91 per cent. The percentage of ash calculated on the dry matter, does not differ materially from that of the tomato. The ash of the fruit of this plant, like the ash of the fruit of the plant previously described, is made up principally of the phosphates of the alkalies; or of phosphoric acid, potash and soda. These three bodies constitute about 81 per cent. of its inorganic matter. It is more rich in phosphoric and sulphuric acids and soda, and less rich in chlorine than the tomato.

Proximate organic analysis.

	With the water.	Without the water.
Sweet matter and extract, with a peculiar bitter principle,	3.040	50.964
Starch with a little fibre,	0.365	6.119
Albumen,	0.255	4.275
Casein,	0.200	3.353
Dextrine or gum,	0.370	6.203
Fibre,	0.760	12.741
Matter separated from the fibre by a weak solution of caustic potash,	0.975	16.345
Water,	91.350	100.000
	97.318	

The fruit, when dry, has a peculiar honey odor. It contains, besides the bodies given in the foregoing analysis, a small quantity of an oil which is volatile, and a little wax which is mostly spread over the outside of the fruit, imparting to its surface a greasy feel. The bitter principle which was obtained with the sugar and extract, can be slightly tasted in the fresh fruit.

About 50 per cent of its dry matter is sugar and extract. The dried fruit has a decided odor of honey, and a pleasant, sweet taste. The matter separated from the fibre by a weak solution of caustic potash, resembles albumen. The loss in the above analysis is owing in part to the oil and part to the bitter principle, which were volatilised.

Amount of the several bodies, organic and inorganic, in 1000 lbs. of the fresh fruit. Calculated from the foregoing analyses.

	Expressed in lbs. and decimals of a lb.
Carbonic acid,	0.2889
Silicic acid,	0.1038
Sulphuric acid,	0.2898
Phosphoric acid and peroxide of iron,	1.7595
Lime,	0.0046
Magnesia,	0.0828
Potash,	1.2496
Soda,	1.9525
Sodium,	0.0686
Chlorine,	0.1057
Organic acids,	0.1341
Amount of ash in 1000 lbs,	6.0400
Sweet matter and extract,	40.9900
Starch with a little fibre,	4.9220
Albumen,	3.4383
Casein,	2.6967
Dextrine or gum,	4.9889
Fibre,	10.2476
Matter separated from the fibre by a weak solution of potash, resembles albumen,	13.1465
Amount of proximate principles in 1000 lbs.,	80.4300
Water in 1000 lbs.,	913.5300
Total,	1000 lbs.

About 86.3 lbs. in the thousand is solid matter: of this 6 lbs are made up of inorganic and the rest of organic matter This calculation was made to show the real or actual composition of the fruit.

Insect in Cherry Trees.

Eds. Cultivator—Enclosed is a section of the trunk of a cherry tree five or six years old, containing an insect in its various stages, from the egg to the perfect insect, of whose name and history I am not acquainted; but which has proved fatal to one of my trees, and from their numbers in this, may prove so to more, if a remedy cannot be found. My attention was called to the tree soon after the opening of the leaf buds, from their withering up, as though seared by fire or frost—the latter of which I supposed to be the cause; but on examining the tree closely, I discovered small perforations through the bark, and penetrating the wood, as may be seen in the section enclosed. The insect appears to be a stranger in this section, nor can I find any account of it in any work in my possession. Its history, if known, may be of use not only to myself, but to many of the readers of "The Cultivator." William Wanzer. *New-Milford, Litchfield co., Ct., 11th of 6th mo. '49.*

The insect above described is a beetle evidently belonging to the family *Bostrichidæ*. It closely resembles the species described by Kollar as the *Bostrichus dispar* (*Apate dispar* of some naturalists)—and may be identical. If so it has probably been imported in trees. It is very destructive when it becomes numerous; as two or more generations are produced in a season, and the tree is bored in every direction; and though the holes are not larger than would be made with a common knitting-needle, the effect is to derange the circulation of the sap; the health of the tree is soon impaired, and its life finally destroyed. As to a remedy, Kollar observes—" With respect to the destruction of these insects, their history shows, that the only way is to cut off the branches that are infected, and should the trunk be also attacked, the whole tree must be cut down, and conveyed out of the orchard; which need not be regretted as it would soon die of itself." Eds.

Test for Good Limestone.

The best lime for agricultural purposes is that which is lightest, whitest, and softest to the touch; the purest and strongest lime is always found the lightest. If then by calcination limestone loses much of its weight by the process; if the lime-shells are extremely light, and require, for slaking them fully, a large portion of water; if they are a considerable time before they begin to fall; if, during the process of burning, the limestone is not disposed to run or become vitrified; if it increases very much in bulk by slaking, and the lime is of a pure white, and fine and light to the touch, it may be set down as very good, and should be used in preference to other lime not possessing the same qualities. —*English Paper.*

Dung of Poultry.—Pigeons' dung is of a very powerful nature, but hot and stimulating, and abounds with the volatile alkaline principle. It contains uric acid, and gives by distillation carbonate of ammonia—yields subtle matter in water, and is very liable to ferment. It also possesses an acid of a very peculiar nature, which increases when the matter is diluted with water, but gradually gives place to ammonia, which is at last abundantly exhaled. It affords carbonate of ammonia, and leaves as a residuum carbonate of lime and saline matter, chiefly common salt. It should be applied fresh, as fermentation diminishes the quantity of soluble matter. The dung of poultry contains silica, and phosphate and carbonate of lime; and, along with the dung of pigeons, has been dried, broken down and powdered, and mixed with earthy substances, and applied during moist weather, and covered by harrowing of the seed, at the rate of forty or fifty bushels an acre. If used fresh, the quantity must be small; but as a very small quantity of such excrements will come into the possession of the farmer, the readiest and probably the most economical application will be to spread it evenly on the top of a dung heap, just before its being turned over, which will mix the substances, and extend the benefits equally. The excrements of animals, as birds, dogs, swine, poultry and pigeons, that eat food of nature and preparation similar to that of man, is of much better quality as a manure than that of those animals, as cows and horses, that are fed with grass and cooked food: but the difference may be partially owing to the constitutional structure of the animal, and the nature of the digestive organs.—*Eng. Farmers' Herald.*

Glass Varnish.—The *Maine Farmer* states that a kind of soluble glass may be made, which, being applied to wood, will render it fire-proof. Take fifteen parts of powdered flint or quartz rock, ten of potash, and one of charcoal. These are melted together, then worked in cold water, then boiled with five parts of water, in which it will dissolve. It may then be applied to wood work or any other substance. As it cools it gelatinizes and dries into a transparent varnish or glass, and the substance thus becomes coated in such a way as to render it incombustible. The editor adds that he has never tried the experiment himself, but that it would not be difficult or expensive to give it a trial.

Coffee a Disinfectant.—It is said that the *odor of roasting coffee* is a most powerful disinfecting agent. Take a red hot shovel with a few kernels of coffee upon it, and it will remove entirely the most offensive odor arising from decaying animal or vegetable matter, or from any other source; a fact worth knowing where the cholera prevails. A friend of ours assures us that he has tried the article as recommended and it answers the purpose effectually.

Notices of New Publications.

European Life and Manners; in Familiar Letters to Friends. By **Henry Colman**, author of European Agriculture, and the Agriculture of France, Belgium, Holland and Switzerland. In two volumes. Published by **Chas. C. Little** and **James Brown**, Boston.

The author of these volumes is extensively known to the American public through his various writings on agriculture, particularly his large and popular work entitled "European Agriculture and Rural Economy." The work before us may be said to constitute his personal narrative during his residence abroad. The letters were not originally designed for publication; but appear in the present form at the solicitation of Mr. Colman's friends, to whom they were all addressed. Mr. C. enjoyed peculiar facilities, from the society to which he was introduced in Europe, of making himself acquainted with "life and manners," in all their phases, and a person of his habit of observation and faculty of delineation could not fail of making interesting and truthful sketches. That the descriptions are *interesting*, we can, for ourselves, affirm, having perused them with great satisfaction; and on the credibility of the witness, we have the fullest confidence in their truthfulness. We recommend the Letters as giving an insight into the condition of European society and manners, not often to be obtained from books or even by personal observation.

British and Foreign Medico-Chirurgical Review, or Quarterly Journal of Practical Medicine and Surgery.

This valuable foreign work, is re-published in New-York, by Messrs. **G. & R. S. Wood**, and is afforded at three dollars a year. No person engaged in the practice of the "healing art" should be without it.

Plow, Loom and Anvil.—A prospectus for the second volume of this periodical will be found in this number. The senior editor, **J. S. Skinner**, Esq., is to be sole conductor of the work for the present; his son, Mr. **F. G. Skinner**, having received the appointment of Collector of Agricultural Statistics, in the Home Department, has withdrawn from editorial charge of the P., L. & A. We presume the work will be continued with no abatement of the interest and spirit which it has heretofore exhibited. Its present editor has been engaged in conducting agricultural journals for thirty years, and is well known throughout the whole country.

Eaton's Agricultural Chemistry.

Eds. Cultivator—Be pleased to allow me the use of an odd corner in *The Cultivator*, that I may introduce to your readers a new work, which will be found to possess great practical value by those willing to examine it. Its title is "A Text Book on Agricultural Chemistry, for the use of Academies, Schools and Agriculturists: comprising that portion of elementary chemistry which is necessary to a full understanding of the changes connected with vegetable organization, and an examination of the different manures, soils, crops, &c., compiled in part from the writings of Petzholdt, Johnston, Liebig, and others."

The author of this work, Mr. **A. K. Eaton**, is a graduate of Hamilton College, and by profession, a teacher. Since his graduation, he has devoted himself, with untiring industry and perseverance, to studies and pursuits in natural science, which have fitted him for successful authorship in his chosen department. He is not a mere theorizer; nor can it be justly said of his book, that it was "edited by a pair of scissors." Although following in the track of the eminent authors mentioned in his title-page, he has received nothing upon trust, but has carefully subjected the principles laid down by them to the test of his own experiments. These experiments and principles he has set forth in language free from unexplained technicalities, and easy to be understood. The result is, a treatise eminently practical, and sufficiently extensive for ordinary purposes. It is published by H. H. Hawley & Co., of Utica. E. N.

Answers to Correspondents.

Gypsum.—"A Farmer's Boy," Westchester county, N. Y. Gypsum is a compound of lime and sulphuric acid. Both lime and sulphur are taken up more or less, as constituent elements of plants. Of course they are "soluble." Gypsum may, no doubt, prevent the escape of gases arising from manure; ammonia, being an alkali, will combine with the acid of the gypsum, and is thus *fixed*. Get Prof. Norton's edition of *Johnson's Catechism of Agriculture*, which is to be had at most book-stores in New-York and Albany.

Time to set out Cedar Trees.—G. L. S., Rutherford county, N. C. Spring is considered the most favorable season. If the trees are not too large, and the work is done carefully, they generally live.

"Ought suckers to be taken from Corn?" We do not think this question has been fairly settled. Probably much depends on the kind of corn. With our northern varieties, the suckers will frequently bear ears, especially if the main stalks are rather thin. But the southern corn seldom produces ears on the suckers, and hence it is argued that the suckers only draw nourishment from the productive stalks. We would advise that you make an experiment by cutting or pulling out the suckers in alternate rows through a field, and measure the product separately.

Grass Land.—See an article on this subject in this number.

We have no knowledge of "Robinson's drying machine," farther than that given in our May No. In reference to the other inquiries of G. L. S., will give an article in our next.

Agricultural Shows.

New-York State Society.—At Syracuse, 12th, 13th and 14th of September.

Seneca County, N. Y.—At Ovid, 4th and 5th of October.

Washington County, N. Y.—At Whitehall, 19th and 20th of September.

Saratoga County, N. Y.—At Mechanicsville, 11th and 12th September.

Rensselaer County, N. Y.—At Troy, 25th, 26th, and 27th September.

Delaware County, N. Y.—At Delhi, 3d October.

Jefferson County, N. Y.—At Watertown, 26th and 27th of September.

Worcester County, Mass.—At Worcester, 20th of September.

Middlesex County, (Mass.)—At Concord, Oct. 3.

New-Haven County (Ct.) Ag. and Hort. Society.—Exhibition at New-Haven, 25th, 26th, and 27th.

Cranberries.—The *Massachusetts Plowman* states that cranberry meadows are much improved by covering them with poor sand—the poorer the better—for if manure or good loam is applied, the growth of grass is encouraged and proves injurious to the cranberry. Sand may be spread on in winter, in the spring, or soon after the cranberries are gathered. Flooding the ground in winter—the water to be on till May, is beneficial.

Notes for the Month.

Communications have come to hand since our last, from F. Holbrook, S. B. Rockwell, L. Durand, James Avery, S. W., J. D. Remington, Lotan Smith, P., A Virginian, W. S., S. Austin, A Farmer's Boy, Agricola, J. R. Stafford, G. L. Simmons, W. L. F., J. P. S.. I. Hildreth.

Books, Pamphlets, &c., have been received since our last as follows:—European Life and Manners, by Henry Colman, 2 vols., from the publishers, Little & Brown, Boston—Report on the Breadstuffs of the United States, by Lewis C. Beck, M. D., from the author —Allen's American Farm Book, new edition, from the publisher, C. M. Saxton, New-York.—A Text-Book on Agricultural Chemistry, by A. K. Eaton, from the author.

☞ The communication "To Western Wool-Growers," from Portage county, Ohio, is deemed too extravagant in its statements to be useful to the public.

Victoria Rhubarb.—We received from Mr. James Wilson, of this city, a parcel of this variety of *pie-plant*, and after a fair trial, we think it decidedly the best we have ever tasted The stalks are large,—though not so *long* as some kinds,—and the pulp is tender, free from fibre, and so pleasant an acid that it was preferred for tarts and pies to any other article to be obtained at that season of the year.

Profitable Swine.—S. Huston, Esq., of Coxsackie, informs us that Mr. M. Hallock, of that town, has a sow which raised forty pigs within the year 1848, which sold for $275,—none of them being kept over nine months. The same sow has now fifteen fine pigs.

Malt-dust or "Sprouts."—Barley, in undergoing the process of malting, sprouts, and after the grain or malt is dried, the rootlets are rubbed off. One hundred bushels of barley are said to yield four or five bushels of this dust. It is a very powerful manure, and is used in England as top-dressing to different crops. It is sometimes used in forming composts. Owing to the large proportion of nitrogen it contains, its tendency to fermentation is great; and on this account it is valuable to mix with peat or coarse vegetable matters. A small quantity of the dust, say four bushels to a common cart-load of peat, laid up in layers with the peat, will soon reduce it to good manure. A handful of this dust to a hill of Indian corn, is a strong stimulant to growth.

Special Premium on Sheep.—A gentleman in Connecticut has offered the sum of $100, to be awarded as a premium on Merino sheep at the coming Fair at Syracuse. The requisitions specify that the sum shall be paid—" for the best twenty-five full blood Merino ewes over one year old, and for the best twenty-five full blood Merino lambs, *less* than one year of age, all to be owned by one person. They must not be from any Saxon cross, and must have been shorn within the present year. Regard being had to size and constitution, with quantity and quality of wool. The stake open to the whole country." The judges selected to award this premium, are J. G. Strean, Washington, Pa.; Francis Rotch, Butternuts, N. Y.; J. D. Patterson, Westfield, N. Y.; A. C. Russell, Kirtland, Ohio; L. G. Bingham, Williston, Vermont.

Early lambs may be taken from the ewes this month, and turned into good, sweet, but not very long feed. They should be kept out of the sight and hearing of their dams, till they are weaned. Both the lambs and ewes will thus be much more quiet, and will become reconciled to their separation much sooner, than if they were within the sound of each other's voices.

Salting Hay.—The practice of salting hay for the purpose *of curing* it, or salting it for the purpose of *making it weigh better*, as is sometimes done when damaged or cheap salt can be obtained,—we think is improper. As a general rule, it is best to allow animals what salt they will eat *voluntarily*, rather than to force them to eat more than they want. It may do to salt a load of hay that has been injured, or which is of inferior quality, to be fed to stock occasionally, as a condiment.

Fallows should be kept perfectly clean. The great object is to clear the ground from foul plants; hence, the cultivator, the harrow, or the plow, according to state of the soil, should be used so often that the weeds cannot grow. This operation also keeps the ground well pulverised, opening it to the decomposing influences of the air, which is of great advantage on tenaceous soils, bringing the mineral elements into a soluble state.

Materials for Manure.—When the labors of haying and harvesting are interrupted by cloudy weather, men and teams may be turned to good account in digging and carting muck, marl, or the coarse grasses of bogs, to the barn-yard. Or these articles may be piled up to be used as wanted. Peat is much better for being exposed to the action of frost, which tends to dissipate the acid and render it fine.

Laborers.—We invite attention to the advertisement of the Commissioners of Emigration, in the present number, in reference to the facilities they offer for supplying laborers in agriculture and other branches of industry. We have known several instances where farm laborers have been procured through this agency, and the persons gave good satisfaction to their employers. An institution of this kind, properly managed, cannot but be useful to the country.

Mr. Vail's Sale of Short Horns.—We expected to have obtained for this number, a list of the animals sold and the prices obtained at this sale. Not having received such a list, we are only enabled to give the following facts, from a letter received from Mr. Vail. Twenty of the animals in the catalogue were sold, and brought the aggregate sum of $2015; four calves from three to seven weeks old, (not in the catalogue.) brought $142.50; those over a year old, averaging $100.75 each. The putchasers were as follows:

Dr. Niles, Washington county, N. Y., one cow

H. Drinker, Wm. Jessup and Thomas Nicholson, of Montrose, Susquehannah county, Pa., two cows and one bull.

H. B. Burgwyn, Halifax, North Carolina, three heifers and two bulls.

Benjamin Jean, Carthage, Jefferson county, N. Y., one heifer and one bull.

Mr. Ogden, for the Quebec Agricultural Society, one heifer.

P. L. Holton, Vermont, one bull.

D. D. Campbell, Schenectady, N. Y., one heifer and one bull.

S. Percivall, Waterville, Me., one bull.

Thomas Hillhouse, Watervliet, N. Y., one bull.

Mr. Starkweather, Boston, one heifer and one bull

H. Harrington, Troy, N. Y., one bull.

T. P. Remington, Philadelphia, Pa., one bull.

Canada Thistles in grass-lands should be cut close to the ground, while they are in blossom and before any of them have formed seed. They may start more or less, and should be again cut the latter part of the season—making it an invariable rule that none of them shall go to seed. This mode strictly pursued, will generally eradicate them, especially if the growth of grass is so encouraged that a close sward is formed. In cultivated fields, successive and thorough plowings, or working the ground with a cultivator with very sharp teeth, will destroy them. But to do this the top must not be allowed to grow. The leaves of a plant are its breathing organs, and no plant can live long without them. Deprive it of these, and the root must die, however deep it may run into the ground, or whatever may be its tenacity of life under other circumstances.

Western Virginia.—In our May number we gave an inquiry in relation to the country "between the White Ridge and Allegany mountains" in Virginia. In reference to this inquiry, Mr. T. B. McRobert, of Williamsville, Va., writes—"this section, in its climate, soil, minerals, mineral-springs, water power, &c., is certainly one of the most desirable in North America. But for want of proper roads, its immense resources have laid dormant. Our last legislature passed several rail-road bills, which will have the effect of calling public attention to this part of the country." Mr. McRoberts has issued a prospectus for the publication of a semi-monthly paper, to be called the "*Western Advocate*," the design of which is to promote the varied interests of Western Virginia. It is to be published at Lexington, Va., semi-monthly, at $1.25 in advance, $1.50 if paid in six months, $1.75 at the end of the year. Mr. McR. states that he was the publisher of the *Virginia Farmer*, twelve years ago. Persons wishing to subscribe for the *Advocate* are directed to address James Grey, Esq., Deerfield, Augusta co., Va.

Scare-crows.—The *Massachusetts Plowman* observes that scare-crows, to be most effective, should be made to resemble the object of which the crows are most afraid, that "is a real living man, lying in wait with his gun." To make a scare-crow it is therefore directed to take an old flour barrel, with one head or no head. Set it in the part of the field most exposed. Then take any old coat or frock, stuff it a little and let it hang as easy as when on a man. Now place your stuffed coat in the barrel and let one arm or both hang over a little. Put a hat on too and let it cover the face so close that it cannot be seen. This saves all trouble of making a face like a man's, and the barrel saves all trouble of being particular in the formation of the feet and legs. To complete the work place a few pine boughs over the whole. The boughs should half conceal the man. An old rusty gun or a stick of the right shape, should be placed in the hands of the man.

Do Kingbirds eat Working Bees?—The kingbird has been regarded as one of the greatest enemies of the apiarian, in some situations, from the fact that it is a devourer of bees. Wilson, the ornithologist, suggested that the bird only picked out the *drones*, and never injured the working bees. Some close observers have come to the same conclusion. One writer states that to test the matter, he killed a number of the birds, and though he found many drones in their gizzards, he could find no working bees in them. What has been the observation of others?

Potatoes Mixing at the root. A correspondent of an exchange paper wants to know if different kinds of potatoes will mix at the root. It is, we suppose, a somewhat common idea among farmers, that different varieties of potatoes, if planted near each other, will intermix, so as to produce new kinds. We are convinced the idea is incorrect. We do not believe it is possible for potatoes to mix in the tubers, any more than different kinds of turneps to mix in the bulbs. No one supposes such a mixture possible in regard to turneps, beets, or carrots. The different varieties may mix, to be sure, but they must mix in the *blossom*, and the *seed* produced by the blossoms containing such intermixture, must be planted in order to obtain the new variety thus originated. So it is with potatoes; the *balls* which grow on the top of the stalk, contain the seed; and by plants being raised from them, and in this way only, can new kinds be had.

Prices of Agricultural Products.

New-York, June 15, 1849.

FLOUR—Genesee, per bbl., $5a$5 25. Western, $4.62a $4.75.

GRAIN—Wheat, per bush., Genesee, $1.30a$1.40—Ohio 99c.—Corn, Northern, 64a65c.—Rye, 58c. Oats, 34a35c.

BUTTER—best, per lb., 18a20c.—western dairy, 10a15c.

CHEESE—per lb., 5a7c.

BEEF—Mess, per bbl., $11.50—Prime, $8.50.

PORK—Mess, per bbl., $10.25—Prime, $8.50.

LARD—per lb., 6½a7c., for good and prime.

HAMS—Smoked, per lb., 7a9c.

HEMP—American dew-rotted, per ton, $155.

HOPS—per lb., 6½a7c.

COTTON—Upland and Florida, per lb., 7a8½c.—New Orleans and Alabama, 7¾a8½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a42c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

Remarks.—The demand for flour and grain is moderate, at quotations. Provisions are firm.

Wire for Fences.

WIRE of the best quality, of all sizes, bright, annealed or galvanized. Price from $7 to $12 per 100 lbs. When galvanized, 2½ cts. per lb. extra. Wire is best galvanized, as this keeps it bright, and it lasts much longer. A. B. ALLEN & CO.,

July 1—1t. 189 & 191 Water street, New-York

Wire for Fences.

BRIGHT and annealed, at 7 cts. per lb., for sale at the Albany Agricultural Warehouse. Galvanized Iron Wire furnished to order at manufacturers' prices. HORACE L. EMERY.

July 1. No. 369 & 371 Broadway, Albany, N. Y.

Offered

FOR SALE, the equal one-half interest in a *Nursery* of Fruit and Ornamental Trees, permanently established and beautifully located in New Jersey, within two hours ride, per Railroad, of New-York—six trains of cars passing daily along side and in full view of the nursery. The depot within five minutes walk of the grounds—containing from 50,000 to 100,000 thrifty seedling plants, a portion of which are ready for market—the greatest part ready for working this season. No other nursery in the place.

This is a rare offer, circumstances obliging one of the proprietors to make a change. The whole can be had if particularly required. For confidential particulars, address, *post paid*, J. J. SCOFIELD, Morristown, Morris Co., N. J.

July 1, 1849.—1t.

Office of the Commissioners of Emigration,

New-York, June, 1849.

THE COMMISSIONERS OF EMIGRATION respectfully solicit your attention to the facilities which are furnished by the Institution for the supply of laborers in agriculture, Railroad Making, House Building, Factory Labor, and almost every department of industry.

There are now in the care of the Commissioners, several hundreds of men, women, and children, and an inexhaustible supply arriving, anxious for employment, and willing to engage their services at the current prices of labor. Among them are many able-bodied females, who either have been accustomed to work on the farm or in dairies, or, who with little instruction would be able to do so, who would gladly accept situations of that character, did they but know where to find them. Believing also, that in many parts of this and other States of the Union, there is a dearth of laboring men and women, the Commissioners are desirous of extending, as widely as possible, the knowledge of the number of people desiring employment, and of receiving applications for them from those desiring their services.

The Commissioners will gladly receive such applications, and exert themselves to supply them in the best manner.

Communications, addressed to them, and enclosing the amount necessary to forward to the writers such persons as they require, will be duly acknowledged, and in all cases, if the employers desire it, a bargain will be made with the laborers that the first part of the wages agreed upon, shall be retained by the employer to reimburse the latter the amount expended in forwarding them.

Applications for laborers should state

1st. The occupation.
2d. The sex.
3d. Whether adults or children, or both are required.

Communications should be addressed to,

JOHN H. GRISCOM,
General Agent, Commissioners of Emigration, New-York.
July 1—1t.

Ohio Strawberry Plants.

BURR'S SEEDLINGS; Burr's New Pine, Ohio Mammoth, Sciota, Burr's Old Seedling, and Columbus varieties; for sale at 50 cents per doz. Orders directed to HORACE L. EMERY, Agricultural Warehouse, Albany, will be attended to for August planting.

July 1.—1t.*

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July.) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* Gardening, *in a thoroughly practical as well as scientific sense.*

2. *To the* Description *and* Cultivation *of Fruit Trees.*

3. *To Gardening as an* Art of Taste, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*

4. *To* Rural Architecture, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

NOTICES OF THE PRESS.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. Downing's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

We would call especial attention to this work. We have subscribed for it from its first number, perused it carefully, and practised upon its teachings, and do not hesitate to pronounce it a work of great merit and usefulness.—*Concord Freeman.*

Another volume begins with the next or July number. We most warmly commend this publication to all interested in Rural Architecture, or the improvement of gardens, orchards or country seats. There is no publication so well calculated to exert an influence upon the taste of the country, in the departments to which it is devoted. It enjoys already a large circulation.—*New-Jersey State Gazette.*

Terms—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

The Farmer's Encyclopædia,

IN one volume, royal octavo, 1165 pages, beautifully bound; containing 17 fine plates, and numerous wood cuts. Edited by Gouverneur Emerson. A standard work of reference upon all subjects connected with farming and country life.

"Of all the Agricultural works that have been lately published, this appears the most likely to be of real service to the practical farmer."—*Central New-York Farmer.*

"The Farmer's Encyclopædia is a real treasury of *practical* information, wherein the experience of all ages and countries is *carefully posted up* to the present day, and admirably arranged for convenient reference."—*Dr. Darlington.*

"It is a mine of wealth—no farmer should be without this truly valuable book."—*Burlington Gazette.*

"An excellent work, fit to be distributed in premiums by Agricultural Societies. How much better, and in better taste, than the amount of its cost in money."—*John S. Skinner.*

Sold by Carey & Hart, *Philadelphia*; C M. Saxton and John Wiley, *New-York*; Luther Tucker, and W. C. Little, *Albany*; Derby & Co., *Buffalo*; W. D. Ticknor & Co., and B B. Mussey, *Boston*; W. H. Derby & Co., and Ely & Campbell, *Cincinnati*; Whiting & Huntingdon, *Columbus*; Norton & Beckwith, *Louisville, Ky*; J. B. Steel, and Woodbridge & Co., *New Orleans*; M. Boullemet, *Mobile*; W. D. Skillman, *St. Louis*; N. Hickman, *Baltimore*; A. Morris, *Richmond, Va*; H. D. Turner, *Raleigh, N C.*; F. Taylor, *Washington, D. C.*

July 1, 1849.—1t.

The New Volume and New Prospectus of

THE PLOUGH, LOOM, AND ANVIL.

POPULAR as this Journal is, and so far successful beyond any we have heretofore established, its income does not yet exceed *its own expenses*; leaving the Editors to live on air or hope; neither of which is very substantial diet. Now, as we believe that we have not a friend who would willingly see the man wanting bread, who has been teaching others how to make it all his life, we at once frankly solicit our present patrons to use their influence to *average one* more subscriber each, and then "*The Plough, the Loom and the Anvil*," and those that are working at it, will be doing what is commonly called a *safe business*, and not until then. We are truly sorry to be under the necessity of making this appeal; for, could we afford it, we would *rejoice*, as on past occasions, to show that we would most willingly work as hard, gratuitously, for the great industrial interests of the country, as we are now doing in the hope of at least a scanty support.

Terms of the Plough, Loom, and Anvil, $10 for five subscribers; $5 for two, and $3 for one; or $5 *for two years' subscription*; 64 pages a month.

It is not in the way of remuneration, but to evince our gratitude for the kindness we solicit, and at the same time to promote the perusal of works which every farmer ought to read, that we hereby make the following offer:—

We engage to forward to every one who will send us by mail, at our risk, $10 for a club of five subscribers, or $5 for two subscribers, or the same for the first and second volumes; a copy, at his own option, either of Mr. Carey's admirable work—"*The Past, the Present, and the Future*," or a copy of Col. Randall's book on "*Sheep Husbandry*"—decidedly the best work on the subject that has been offered to the American public. To any one making up and sending us in like manner, $20 for ten subscribers, we will supply a copy of "*Von Thaer's Principles of Agriculture*," for a single English copy of which, we gave $12 in Boston a year ago, considering it a work of inestimable value. To all who may, in like manner, by mail, at our risk, forward $3 for one subscriber, we will send a copy of "*The Elements of Agriculture*,"—the postage of which will not be over four or five cents.

Address, J. S. SKINNER, 81 Dock Street, Philadelphia.

☞ We shall feel and endeavor to deserve and requite the favor, to any Proprietor of a public journal, who shall have the kindness to give the above one insertion, for the benefit of one of the oldest of the fraternity of Editors. J. S. SKINNER.

July 1.—1t.

Kinderhook Wool Depot.

THE success of this enterprize, and the steady increase of business during the past 4 years, has induced the subscriber to associate with him Mr. Thomas M. Burt, as a partner in the business. The integrity and correct business habits of this gentleman, are well known to many prominent men throughout the State; and for more particular information, reference may be made to R. H. King, Esq., or John T. Norton, Esq., of Albany.

With increased facilities for extending their business, the enterprise will be conducted on the same principles as heretofore:

1. The fleeces will be thrown into *sorts* according to *style* and *quality*.
2. A discrimination will be made between wool in good or bad condition.
3. All who desire it can have their clips kept separate.
4. Sales will be made invariably for cash.
5. The charges will be, for receiving, sorting and selling, one cent per pound, and the insurance, which will be 25 cents on $100 for a term of three months.
6. Liberal advances made in cash, on the usual terms.

Wool forwarded from the West and North, should be marked H. B. & Co., Kinderhook, N. Y., with the initials of the owner's name on each sack, and shipped to East Albany.

Kinderhook, May 18, 1849. H. BLANCHARD.

After the 1st of June, the business will be conducted under the name and firm of H. Blanchard & Co.

Reference may be had to,
Dr. J. P. Beekman, Kinderhook, N. Y.
Benj. P. Johnson, Albany, "
L. A. Morrell, Lake Ridge, "
D. S. Curtis, Canaan, "
C. W. Hull, New-Lebanon, "
J. Murdock, Wheatland, "
C. W. Richmond, Aurora, "
Nathaniel Sawyer, Cincinnati, O.
M. D. Wellman & Co., Massillon, O.
Freeland, Stuart & Co., New-York City.
R. Carter, Chicago, Illinois.

Haying and Harvesting Tools.

Grain Cradles.—Grant's, and Myers & Bryan's, both premium cradles.

Grass and Grain Scythes—Dunn's and Troy, (premium scythes.)
Revolving Horse Rakes.—Wilcox and Downer's, " rakes.
Hand and Gleaning Rakes, of various makers.
Scythe Snaths—Clapp's, Lamson's and others.
Sickles, Rifles, Scythe Stones, &c., &c.
Anti-friction Rollers and Cranks for Grindstones.
Grindstones hung complete for use.

Also, every Implement, Machine and Seed wanted by the farmer. All warranted. Constantly for sale at the Albany Agricultural Warehouse, Nos. 369 & 371 Broadway, Albany.

H. L. EMERY.

☞ Catalogues gratis on application by mail, &c.

Morgan Horse Black-Hawk.

THIS well-known and popular stallion will stand this season, at the stable of the subscribers; terms, $15 the season, payable in cash, or a satisfactory note on demand with interest. For particulars in regard to pedigree and performances, see large bills, and previous volumes of *The Cultivator*. D. & D. E. HILL.

Bridport, Vt., May 1, 1849.—3t.

Portable Self-Acting Cheese Press.

Patented August, 1847, *by Chester Stone.*

THE most durable, simple, convenient, and economical press known. The weight of the cheese governs the pressure, or it may be graduated as desired. The principle is admirably adapted to packing flour into barrels and other uses. It acts on a double lever purchase, the article pressed being the *power*; or in other words "The cheese presses itself." Its weight is 70 to 100 lbs., occupies but little room, moved on castors or small wheels, and is sold at only $7 to $10, according to size. Already in extensive use in the western part of the State, and only need to be seen to be approved. For presses or exclusive rights to manufacture and sell them in any parts of the counties of Saratoga, Washington, Rensselaer or Columbia, apply to H. VAN OSTRAND,

March 1, 1849.—tf. West Milton, Saratoga Co., N. Y.

Morse's Grey.

THIS celebrated horse will stand the ensuing season at the stable of JAMES RICE, in Spiegletown, three miles north of the village of Lansingburgh. He is a beautiful dapple grey, 15¾ hands high, strongly and finely proportioned; has trotted his mile in 2 minutes and 50 seconds; is a square trotter, and combines first-rate trotting qualities. and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper, are eagerly sought after in the market, and command prices varying from $150 to $500.

The very high reputation of his stock as road horses, and the extraordinary prices they command, render him by far the most profitable horse to breed from of any in the country.

Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner, Mr. CALVIN MORSE.

Terms, $10 the season. Insurance to be agreed upon.

Communications addressed I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

May 1, 1849.—3t.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown to be of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one

G. H. DADD, M. D.

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do.
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle.
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Haymarket Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. June 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

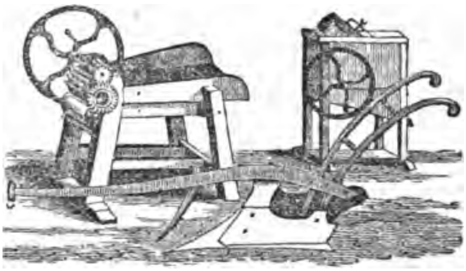
37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



John Mayher & Co.

United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co.'s celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Oct. 1. 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

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WHEELER'S PATENT IMPROVED PORTABLE

Railroad Horse Power, Thrasher & Separator.

THE advantages of the above horse powers are—1. They occupy but little more space than a single horse. 2. They can be moved by the weight of the horse only, by placing them at an angle of 10 or 15 degrees. 3. They are comparatively light and portable, and can be easily transported. 4. They are simply constructed, not liable to get out of order, and move with little friction, the revolving plane gearing without any complex or intermediate wheels, directly into the pinion upon the shaft on which the pully belt runs.

The THRESHERS consist of a small spiked cylinder with a concave plane over it, and a level feeding table. There are several improvements in the overshot thresher. 1. They admit of a level table for feeding, thus enabling the tenders to stand erect, and control the motion of the horse and machine by means of a brake, by which accidents are avoided. 2. In consequence of the spikes lifting the straw and doing the work on the top, heavy substances such as stones, blocks, &c., drop at the end of the table, and are not carried between the spikes, by which they and the machine are broken 3. The overshot cylinder does not scatter the grain, but throws it within three feet of the machine. 4. This arrangement also admits of attaching a separator high enough from the floor or ground to allow all the grain to fall through it, while the straw is deposited by itself in the best condition for binding. 5. Neither grain nor straw are broken by this machine. 6. The cylinder is longer, which admits of faster and more advantageous feeding; it is smaller and with fewer teeth than ordinary threshers, thus admitting of more rapid motion and faster work with less power; and the diminution of teeth in the cylinder, is fully made up by those in the concave, which is stationary. 7. The separator is a great advantage in diminishing the labor of raking out the straw, as it leaves the grain in the best condition for the fanning mill. Three men, with a single Power, can thresh from 75 to 100 bushels of wheat or rye; or four men with a double Power, 175 to 225 bushels of wheat or rye, or double that quantity of oats or buckwheat, per day. All the above are compact and can be carried where wanted complete, or they may be readily taken apart and packed for distant transportation by a wagon or otherwise.

Price of single Power, ...	$60
" " Thresher, ...	28
" " Separator and fixtures, ...	7
" " Bands for Driving, etc., ...	5
" " Saw mill, complete and in running order,	35

The price of the double power, thresher, separator, &c., complete, is $145, including rights of using. The above are sold singly or together, as desired.

The above power is warranted to work well and give satisfaction.

A. B. ALLEN & CO..
July 1—1t. 189 & 191 Water street, New York.

Peruvian Guano.

JUST arrived from the Chinche Islands, 730 tons first quality Peruvian Guano. Six years' of experience in the use of this guano by our farmers and gardeners, in the States bordering the Atlantic coast, has proved it far superior to any other, and the cheapest manure they can purchase. It is particularly valuable for wheat and other winter grain, grass, and in fact, all crops grown.

A. B. ALLEN & CO.,
July 1—2t. 189 & 191 Water street, New York.

Wheeler's Patent Horse Power and Threshing Machines.

THE attention of farmers is called to the following extract from the pen of J. N. Rottiers, Esq., of Lafargeville, N. Y., June 8, 1849, it being one of the numerous communications received, concerning the utility of the above celebrated machines:—

"Dear Sir—Wheeler's Threshing Machine, Power, &c., which I purchased of you, has proved satisfactory in every respect. The fact is, the whole of the machine is an admirable simple contrivance, and that any improvement has been made in it, would seem incredible to me, if I had not your word for it.

Practically a farmer, I have used these fourteen years, a great variety of threshing machines, horse powers, &c., but with none am I so well satisfied as with this which I purchased 2 years since.

One year more, and mine will have paid for itself, and then I would not take two hundred dollars for it, and do without another like it.

With a change of horses, and men enough to take away or stack the straw, I believe I can thresh as much per day as with any large Six Horse Power machine, and with as much ease for the team.

But we do not want all the neighbors to help thresh—as three of us and two horses generally thresh from ten to twelve hundred sheaves per day, besides taking care of a large stock of cattle, &c., &c.

It is in fact the very machine which should stand upon the barn floor of every farmer, or where the farm is not large enough, two or more farmers should join, and own one together. Change works, and do their own threshing.

Wishing that it should be generally known as a benefit in time, labor and economy, I have on all occasions deemed it a pleasure to speak in its praise, and several of my neighbors say they shall purchase them."

The question is frequently asked—Why is not a cleaner attached to Wheeler's Thresher? In answer to this question, I will give the reasons, as expressed by an extensive grain grower who has used nearly all kinds of threshing machines, cleaners, &c.

1st. Because the original cost of this Horse Power, Thresher and Separator, together with one of Grant's largest and best fan-mills, is from seventy to one hundred dollars less than any good cleaner and thresher combined can be obtained for.

2d. Because, when purchased separate, they can be used separately, are more portable, simple, and durable; also, the fan-mill is adapted for cleaning all kinds of grain and grass seeds, and the Thresher for threshing clover and timothy.

3d. Because of the great simplicity and reduced friction of machinery, less power is required, no driver is needed, fewer men are necessary to attend to the whole operation, to do the same amount of work, than when the cleaner is combined with the thresher.

4th. Because less grain is wasted—as the fan-mill, when driven direct from the power is more steady, and cleans perfectly with once going through—while, when the cleaner is combined, it derives its motion from the cylinder, which is always varying its speed as the feeder presses fast or slow, consequently blowing away grain with the straw and chaff at one moment, and leaving it half cleaned from the chaff the next—requiring, nine cases in ten, another operation by a fan-mill to prepare it for market.

5th. Because the expense of threshing is much reduced by the great simplicity of these machines, and all can be managed by the hands usually about the farm; and in stormy weather, all can be operated inside of barns, when the laborers and teams could do little out of doors to advantage.

For terms, prices, descriptions, &c., see agricultural papers for 1847, 1848, and 1849, also descriptive catalogues of Albany Agricultural Warehouse and Seed Store, furnished gratis at No. 369 and 371 Broadway, Albany, N. Y., by

July 1, 1849. HORACE L. EMERY.

THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by

LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

$1 per ann.—7 copies for $5—15 for $10.

☞ All subscriptions to commence with the volume, (the Jan No.,) and to be PAID IN ADVANCE.

☞ All subscriptions, not renewed by payment for the next year, are discontinued at the end of each volume.

☞ The back vols. can be furnished to new subscribers—and may be obtained of the following Agents:

NEW-YORK—M H. NEWMAN & Co., 199 Broadway.
BOSTON—J. BRECK & Co., 52 North Market-st., and E. WIGHT, 7 Congress-st
PHILADELPHIA—G. B. ZIEBER.

ADVERTISEMENTS—The charge for advertisements is $1, for 12 lines, for each insertion. No variation made from these terms

THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, AUGUST, 1849. VOL. VI.—NO. 8.

Agricultural Notes.

Husbandry of Vermont.

We had lately an opportunity of passing through several of the western counties of Vermont, and offer the following notes in regard to the different matters to which our attention was drawn.

SHEEP.—Beginning at the farther end of our tour, we first called on S. W. **JEWETT**, of Weybridge, whose flock of sheep is well known. Since we had before seen it, Mr. J. has imported some ewes from the flock of the late Lord Western, Essex, England. They had just been shorn. We did not see their fleeces. They are well shaped sheep, and of good size. Mr. J. is crossing them, and a part of the rest of his flock with a ram of the Taintor importation, and has some handsome lambs of this cross.

M., & A. L. BINGHAM, of Cornwall, have noted flocks. The former has 500 and the latter 1400 head, including lambs. Their aim, we understand, has been for several years, to produce sheep of strong constitution, with heavy fleeces, of about the quality of common Merino. Mr. M. Bingham showed us 400 fleeces very well washed and put up in good order, which he informed us averaged five pounds each. Messrs. B. have purchased sheep of Mr. Taintor, of Hartford, Ct., imported by him from France. Mr. M. B. sheared 12 ewes of this stock the present season. They were not washed. One of the fleeces weighed seventeen pounds, and the average was thirteen pounds ten ounces—twelve months' growth. Mr. A. L. Bingham has between forty and fifty, of different ages, of the Taintor stock, and a similar stock imported by F. Rotch, Esq., of Otsego county, N. Y. Of these, several had their fleeces on, and are to be shown at the next N. Y. State Fair. These sheep are much larger than any of the Spanish race that have heretofore been introduced here, and produce much heavier fleeces than any others with which we are acquainted. Their bodies, and even their heads and legs, are thickly covered with wool. Some of them have very great perfection of form, with very even fleeces, of good quality for Merino.

WM. R. SANFORD, of Orwell, has a flock of fine Merinos, which for several years has numbered from 300 to 500 head. Mr. S. has managed his flock with much care and judgment, and it has long held a high rank among the best of this section. This year's clip, 300 fleeces, well cleaned and nicely put up, averaged over four pounds each.

J. H. **CHITTENDEN**, of Orwell, has a flock of 383, a portion of which are Saxons, from the flock of Mr. Colt, of Pittsfield, Mass., and the younger part of the flock are a cross of these on Merinos. The fleeces averaged 3 lbs., 5¼ ounces, clean, and in good order. **JOHN W. BACON**, of Orwell, has 215 sheep, mostly of Saxon blood; the fleeces of which averaged 3¼ lbs. the present season.

JESSE HINES, of Brandon, usually keeps about 450 pure Merinos—has this season 364. Mr. H. has exhibited sheep at the shows of the N. Y. State Ag. Society, which have been highly commended. After examining his whole flock, we are enabled to say that in our opinion, he is a judicious and careful breeder. His flock shows great uniformity in shape and weight of carcass, and presents an admirable appearance of healthiness and thrift. From what we saw of the fleeces, there is a general uniformity in the style of the wool, and the prices at which it has sold denote its quality. For several years past, excepting last year, it has brought an average of about forty cents per lb., and the fleeces have averaged 4¼ lbs. each.

J. S. **PETTIBONE**, of Manchester, has 400 sheep. They are descended from ewes of the Humphrey stock, crossed with rams from the Jarvis flock, and others from the flock kept by the Shakers at Enfield, N. H. He has paid much attention to the management of his flock for many years, and his care and attention has been well repaid. In respect to wool, this flock presents rather a peculiar character. It has generally an unusual length of staple for Merino wool, and is very soft, elastic, white and free from gum. The weight of the fleeces, washed, comparing one year with another, has been 4¾ lbs. He has now, two years' clip on hand. For several previous clips, he has obtained forty cents per pound. We would not presume to dictate so experienced and successful a wool-grower as Mr. **PETTIBONE**,—but we were so struck with the style of much of his wool, that we should like to see the experiment made, with a selection from the flock, for the production of the *finest* kind of wool for muslin de laines and merino cloths. It appears to us that wool might in this way be obtained, which would be very superior for these purposes.

SHELTER AND FOOD FOR SHEEP.—The importance of shelter for sheep, is acknowledged by all the best wool-growers with whom we conversed, and most of those we visited, have made good arrangements in this respect. Mr. A. L. Bingham has extensive accommodations of this kind, lately completed. His sheds, placed around his barns and yards, with their various divisions and apartments, for sheep of various ages and conditions, seem almost like a labyrinth; but when their situation and their relative connection is understood, they are seen to be very convenient. Though all the apartments can be well aired and ventilated, the temperature can be so regulated in some of them that they may be warm enough to have the lambs come at any time in the winter, without any danger of their suffering from cold. Most of the farmers we have named, have such shelters that the sheep can obtain protection from storms at all times, and many deem it important that they are not *wet* during the winter.

Much attention is paid to feeding the sheep. Hay, straw, and pea-haulm constitute the bulk of winter food. They are fed, mostly, in oblong boxes, with round smooth rungs at such distances apart that the sheep can readily pass their heads between them. They eat with their heads in the boxes, and do not pull the hay over each other, or waste it, as they will do when fed from racks made in the old mode. Whatever is left in the boxes is taken away and fed to young horse-stock or cattle, which eat it well. Carrots and other roots are given to the sheep through the winter, and the allowance to the ewes is increased when they suckle. All speak highly of the carrot. The beet is less nutritive than the carrot, but from its cathartic quality, is useful as a *medicine* when sheep are kept chiefly on dry fodder. The carrot yields from 600 to 800 bushels per acre. All the sheep have constant access to salt, and to the best of water, which in most instances, is brought by aqueducts into their respective yards, where it runs at all times, unchecked by drouth or frost.

Another great advantage from thus keeping sheep confined in winter, is the saving of manure. Muck and litter, spread over the ground at first, absorb all the liquids, and the manure is of the strongest and best kind for any purpose.

The sheep are generally pastured on hilly or mountainous lands, which are seldom or never plowed, and in many instances would be of little value for any other purpose. These pastures afford sweet and nutritious feed, and the animals thrive well and are healthy here. Sheep are kept on them for a greater part of the year than would be expected by a person not acquainted with them. The rule is, to keep the sheep out till snow comes, if it is not till December; and in many instances they are turned out again as soon as the ground is bare. Mr. Hines informed us that he turned out a portion of his flock, the present season, the 13th of April, and that 200 sheep did not eat 200 pounds of hay afterwards. He has often turned out as early and sometimes earlier than the date mentioned. Mr. Pettibone states that he has sometimes turned out in March —often the early part of April. In only moderate storms, the sheep have shelter in woods; if severe storms occur, they are taken up.

It may seem singular that sheep can obtain support so much of the year on these mountain pastures. During the warm season, they feed almost entirely on the highest parts; and the lower slopes and valleys are left comparatively untouched for several weeks. The grass—(blue-grass, &c.) is of such a nature that it is not greatly injured by frost; and as the weather becomes cold, the sheep descend to the warmer and lower parts, where the feed is abundant. What is not eaten in the fall, remains till spring; and being covered with snow and excluded from the air during winter, it appears quite fresh, and affords good support to the sheep as soon as they are turned out. The warm valleys and sunny sides of the hills, protected from cold blasts, feel the first influences of returning spring, and a thick and sweet herbage is soon produced, on which, in connexion with the growth of the former season, the sheep subsist, till the increasing warmth of the season clothes the mountain ranges with verdure, and the sheep again ascend to their favorite haunts.

Facilities for keeping sheep.—Much of the region through which we passed, affords peculiar advantages for keeping sheep and other live-stock. Many farms comprise three descriptions of land, each adapted to a different purpose. A portion lies on streams which overflow their banks in spring, and produces every year, with no attention whatever, (except in some instances to keep out the wild grasses and shrubs,) from a ton and a-half to two tons of hay to the acre. A second portion is situated between the meadows and hills, and forms the most easy and profitable soil for cultivation, and the production of grains, vegetables and fruits. A third portion lies on the hills and mountains, and affords permanent pasturage. The pastures generally receive no manure except what is left by the stock while grazing them; though the application of plaster is sometimes resorted to with excellent advantage. Thus the second portion of the farm, or that which is cultivated, is all that does not support itself, and this receives the the benefit of the other portions. To this, the stock is brought in winter to consume the hay grown on the intervales, and the manure is copiously applied to the cultivated crops, making the land rich, and insuring large returns. But the alluvial meadows, besides affording, in many cases, the hay for all the stock of the farm, are often grazed in spring, before the grass has started sufficiently in the pastures to support stock, and are always closely fed from the time the hay is off till snow falls. Notwithstanding this, the produce is undiminished.

In respect to the effect of feeding these meadows, we questioned many of the farmers whom we met. The general testimony was, that it did no injury, and some affirmed that in many cases it was a benefit. Mr. Thrall, an intelligent and observing farmer in Rutland, informed us that his meadows were decidedly improved by feeding; because, if they were not fed, and the "old fog" was left on the ground, the grass became *sour* and wild herbage came in. This was also the testimony of Mr. Kelley, a large farmer in the same neighborhood.

The alluvial lands to which we allude, are mostly situated on the waters of the Lemon-Fair, the Otter-Creek, and the Batten-Kill. Some of the higher and warmer portions are sometimes cultivated, and produce the most luxuriant crops. Mr. Thrall showed us a beautiful field of corn, on a branch of the Otter-Creek, and informed us that he had, in a former season, raised from this land one hundred and two bushels of corn to the acre, ascertained by actual measurement.

Many of the mountain pastures are valued at only $3 to $8 an acre. It costs but little to fence them, either for sheep or cattle. A lot of suitable soil and aspect is first selected; it is cleared of wood and sown to grass. It is surrounded by a *bush* fence, made by falling trees and shrubs into a line, and in such a manner as to turn the stock. The fence being in the woods, it is not necessary that it should be very high or very strong, and with a little attention every spring, to fill up the lowest places, it lasts many years.

Dairying.—On some farms, cows have lately taken the place of sheep; and we are inclined to think that, on the most level and fertile lands, a considerable change is destined to take place in this respect. Wool-growing will probably be more confined to the cheaper and rougher soils, and the making of butter and cheese, and the fattening of stock will be more extensively pursued on the more valuable portions. In Orwell, Mr. Sanford conducted us to several cheese-dairies that appear to be well managed. J. C. Thomas keeps forty-eight cows. He did not commence making cheese last year till after the first of June. He sold his cheese *green* at six cents per pound. The cows yielded an average of $30 each, besides the milk, butter and cheese used in the family, not reckoned.

Israel Smith keeps fifty cows,—has generally sold his cheese at about six and a half cents per pound; and the average return for each cow, in cheese and butter, has been $25 the season. It is proper to mention, that this section of the country has been visited by severe drouths for the last three seasons; and myriads of grasshoppers have each season eaten up the herbage of the pastures. These causes have, it is thought, lessened the products of the dairies to the amount of twenty to twenty-five per cent. Mr. Smith has a neat and productive farm, consisting of 430 acres. He has lately erected a commodious and convenient barn, for the accommodation of his cows. They stand on each side of the floor-way, which runs lengthwise of the barn, and are fed directly from the floor, without mangers,—a plank eight or ten inches high preventing the fodder from getting under foot. There is a cellar under the barn for storing vegetables, for winter feeding. Mr. S. prefers the carrot to any other root, and raises from an acre to two acres annually. They are fed in quantities of a peck to half a bushel to a cow through the winter,—the larger quantity being given from the time the cows calve till they go to pasture. Both Mr. Smith and Mr. Thomas have formerly kept sheep. They concur in stating that cows are most profitable on their farms. The whey in both dairies is fed to swine; and we did not understand that any credit was made for it, in the estimate of returns for the cows.

On the farm of the late **JOHN THOMAS**, sixty cows are kept,—twenty at the homestead, and forty under the care of a tenant. The home dairy (we did not see the other,) is conducted with great neatness, and the cheese has a high reputation for excellence,—commanding seven cents per pound. We obtained no statistics as to the quantity produced.

D. C. **RUST** has thirty cows, and his fixtures for making cheese are well arranged. His absence from home prevented our obtaining particulars in regard to the dairy.

IMPROVEMENT IN CATTLE.—Considerable interest is awakened in several neighborhoods, in regard to the improvement of cattle. A. **CHAPMAN**, of Middlebury, kept for several years a first rate Ayrshire bull, from the herd of Mr. Cushing, of Watertown, Mass. We have before spoken of this stock; but it has since been more fully proved for the dairy. Mr. C. has several half blood, and some three-quarter blood Ayrshire cows. Some of them are, in points, about all that could be looked for in a dairy-cow; and we have reason to believe that their "looks do not belie them." Mr. C. informs us, that in fourteen days of June, 1848, four of these cows made 80¾ pounds of butter, besides supplying a family of fourteen persons with milk and cream. One of the four made 11¾ pounds of butter in seven days. The last of September, 1848, three of the above four cows made 30 pounds of butter in seven days,—or ten pounds per week each. They are a small-boned, thrifty stock. Mr. C. states that he killed a pair of half blood steers, three years and six months old, fed for two months mostly on sugar beets,—no meal or grain of any kind,—and they weighed a trifle over a thousand pounds each.

Messrs. **BINGHAM**, of Cornwall, have introduced the full blood Herefords, from the late herd of Corning & Sotham, of this city. They look, generally, remarkably well, and prove to be a very valuable stock for this section. Their hardiness adapts them to the climate; they are easily kept, and thrive rapidly on hay or grass. The general characteristics of the Herefords have been stated in our columns. A. L. Bingham has several Durham heifers, purchased of Mr. Rotch, of Otsego county, N. Y., which he is crossing with Hereford bulls.

PARIS FLETCHER, of Bridport, has several full blood Durham cows, and several good half bloods. Two of the full bloods have lately been sold to Mr. Henshaw, of Boston. Mr. **CHIPMAN**, of Shoreham, has some fine cows,—crosses of the Durham breed. A four-year-old cow of his gave, as was stated, 24 quarts of milk per day in June.

Mr. **SANFORD**, of Orwell, has some full blood Devons, and some highly crossed with the Devon. He has a beautiful young bull, purchased of Mr. Atwood, of Connecticut. He was by Mr. Hurbut's bull, Bloomfield; his dam from the herd of Mr. Washbon, of Otsego county, N. Y. The Devons have thus far done well in Mr. S.'s hands, and he is determined to increase them. We see nothing to hinder their being a useful and profitable stock here.

Mr. **VANDERLIP**, keeper of the hotel at Manchester, has some Durham cows, from the herd formerly owned by Hon. L. C. Ball, of Hoosick, N. Y.; two of which are great milkers. He has also some handsome cows and heifers from Connecticut, showing much Devon blood, which appear well as dairy cows. There are several bulls and considerable young stock in the neighborhood, mixed more or less with the Ayrshire and Devon blood; and the farmers generally consider an infusion of the blood of these breeds an improvement.

HORSES.—The introduction of "Black Hawk," has made an unquestionable and important improvement in the horse-stock of this section. The oldest of his progeny here are four years old, and have been more or less proved. They have generally size enough, and a large proportion of them are superior in form, style, and action. The maximum of their speed has not, of course, been ascertained at this green age; but that they will not be wanting in this respect, might be shown by examples "too numerous to mention" here. As a specimen, we will refer to the performance of a mare, four years old, owned by J. W. **HOLCOMB**, of Ticonderoga, which, as we were credibly informed, trotted in a sleigh, last winter, *twenty-six miles in two hours and ten minutes*. Those who wish farther particulars in regard to the stock, will obtain them by making inquiries in the proper quarter.

Mr. J. **HILL**, of Sunderland, has introduced a horse which is a cross of the English draft-horse. We had not an opportunity of seeing him; but he was described to us as being six years old,—seventeen hands high,—weight 1380 pounds. He is said to be well made, and a good traveller. It is thought he will be useful in improving the stock of the neighborhood.

APPEARANCE OF CROPS.—We found that portion of Vermont lying between the Green Mountains and Lake Champlain, suffering for want of rain. *Grass*, so important to this section, must be light, particularly on old grounds. In other sections through which we passed, the crop looked well. *Wheat* is not very extensively cultivated. It generally does well,—nearly as well as it ever did here, except when attacked by the midge,—commonly called the "weevil." The means of escaping this insect, are to have the grain either very *early* or very *late*. Early winter wheat may become too far matured to be much injured by the insect by the time it appears; and the sowing of spring wheat is deferred till the last of May, so that it will come into bloom after the insect has passed. We saw in Shoreham, several fields of very promising winter wheat, and were informed that this kind generally gives good yields. The late sowing of spring wheat. to which the farmers are obliged to resort, renders i liable to rust; but if it escapes this, it yields from twenty to thirty bushels, and sometimes over forty bushels per acre. *Oats* are extensively cultivated, and yield well. They may be said to be the only grain of which a general surplus is produced. *Indian corn* is raised in sufficient quantity for home consumption. The warm valleys of the Otter-Creek and Batten-Kill produce good crops,—some farmers raising from 500 to a thousand bushels each. *Peas* are a valuable crop on many farms. Mr. Sanford, of Orwell, who cultivates them quite extensively, puts them on sward-ground, plowed either in autumn or spring, sows three bushels of seed to the acre, and obtains from twenty-five to thirty bushels per acre. The crop is cultivated with but little expense; it leaves the ground light and clean, and it comes in early for fattening hogs in the fall, for which purpose, in connexion with the waste of the dairy, it is much used. Peas are considered worth as much, or more per bushel, as Indian corn. Mixed with oats and ground, they form the best of feed for horses, and also for sheep. The variety commonly cultivated is the Canada field pea. *Potatoes* have generally suffered from the *rot* for several years, and the cultivation of the crop has greatly decreased on this account. The variety called *western reds* has generally escaped the rot better than others. *Broom-corn* is raised to some extent in some neighborhoods, and is made into brooms by those who raise it. Messrs. RUST, HIGGINS and NOBLE, of Orwell, are engaged in the business. The latter has eight acres the present season. Of *fruits*, apples, pears and plums do well on the warmer soils, and particularly well on the slate loams. We were sorry to see a general neglect, in most neighborhoods, in regard to the culture of fruit trees. On many farms, the only orchards were those planted by the first settlers, which, though formerly flourishing, were in most instances in an unproductive condition. Now that rail-roads are soon to afford ready means of transportation to the best markets, we hope more attention will be given in this section to fruits, which we are confident would give profitable returns.

GENERAL IMPROVEMENT.—We were happy to notice visible signs of improvement in various branches of agriculture, in most neighborhoods through which we passed; and we saw many places, besides those we visited, which we should have been pleased to examine, had opportunity permitted. Among these, we may name the neat looking farms of Mr. MARSH, of Clarendon, Mr. HULL, of Wallingford, Mr. HILL and Mr. LATHROP, of Sunderland, Mr. CANFIELD, of Arlington, and others, whose owners' names we did not learn.

Suggestions for Farmers.

System, Order, and Economy, in Feeding Stock.

To all farmers, whether occupying fifty acres or three hundred and fifty acres, there is no portion of their duty that I would more urgently press on them, than System, Order and Economy in *feeding* their cattle and stock generally. Nature has implanted in all living creatures, two laws, which never fail, while in health, to induce the use of nourishment: and these imperative laws are hunger and thirst. Regular and systematic obedience to these laws, conduces to health,—any deviation from system and regularity, leads to *disease and death*.

I deem it wise to seek and examine the opinions of men who devote large portions of their lives to the study of the animal structure, and the functions of the complicated machinery of life; and while we appreciate the services rendered to us, we may with advantage, temper their zeal, by using and applying, every day, facts, indicating the true course of action to be pursued in our agricultural vocation.

Thus, though the process of digestion of food in the stomach, seems in the minds of some men to be well understood, I confess that to me, the subject seems to need far more investigation. Great advances have been made, deep research and strong reasoning, yet the conclusions may not be definite. Nevertheless, science has so far opened her treasures to us, that with careful observation, added to study, we *can* regulate the nature of our animals, so as to add to or diminish their fat at our pleasure.

To effect this desirable object, we must remember that it is the sensation of hunger and thirst, and their proper gratification, we are to watch and appease. Observation and reasoning must guide us in the selection of the proper material, and its due preparation. It is not my intention to go into the subject of feeding or fattening our animals, but to lead the farmer to the consideration of the importance of rigid *system* in this and every other branch of farming. It is necessary, however, to touch upon feeding, incidentally, to prove my positions.

We give to animals a *variety* of substances, from all of which certain principles are derived, of greater or less value in the production of fat and muscle; but it is a fact which ought to be better known, that from each and all of these varieties of food, a few elementary or constituent parts, alone contain the *nutritive matter*. Hence the necessity for ascertaining *which* of the varieties afford the greatest quantity of nutriment,—a most important source of true economy. These elements derived from vegetable substances, are mainly gluten, starch, gum and sugar; and of these, we find the largest portion of all our grains to be starch and gluten.

This gluten is the great nourishing portion of our fodder; upon this our stock will always thrive and do well, while on the contrary, if gluten is *absent*, and the other elements *abundant*, they will fall off and ultimately perish.

Perhaps, some may ask, what is this gluten? why not use some word that all may understand? In reply I would say, that the brevity of the word is most convenient; though undoubtedly this, like many other terms in daily use, require oft repeated explanation, until familiarity shall rank them among words of every day common use. Gluten is the tough, elastic substance which remains after washing flour in a cloth until the starch and all other matters are carried off; gluten remains as a tenaceous adhesive mass, insoluble in water, but soluble in alcohol, and readily soluble in the stomach of animals. This is the portion of our wheat and other grains which affords the most valuable nutriment to our cattle and other animals. The establishment of this fact, teaches us the necessity of examining our varieties of food, that we may use those possessing the largest share of this nutritive element, and establish a system of feeding without waste, and accumulate fat in the least time. These examinations have been made for the benefit of the English cattle-breeders, and I select a few varieties as given in the following table, to show how much vegetable substances vary in nutritive power.

One thousand parts of the following vegetables in their green state, afforded nutritive matter as follows:—

	Whole quantity of nutritive matter.	Starch.	Gluten.	Sugar, &c.
Wheat,............	955	730	225	
Barley,............	920	790	60	70
Oats,............	743	641	87	15
Rye,............	792	645	38	109
Peas,............	570	501	26	43
Oil Meal,..........	151	123	17	11
Clover,............	39	30	5	4
Timothy, ...	33	24	....	9

Davy's Ag. Chemistry.

It is to be hoped that before long we may add Indian Corn to the foregoing list; but as yet no sufficiently accurate *examination has been completed*.

Here "we have facts abundant to show" the necessity of *a system*, to avoid waste. But every farmer knows or ought to know that, if a cow is deprived of her food in sufficient quantity, for even one day, the quantity of milk will be somewhat reduced, and it will require *two* or more days of *regular* feeding to bring the quantity of milk back to its average quantity. This is another proof of the need for system and order with our stock.

We are all familiar with the art of mastication, and the method by which our cattle perform this essential preparation of their food for digestion. From observation, we know the necessity of this grinding process, and when from any cause it is suspended, our cattle become diseased. Hence we can readily see that when we shut our cattle in pens, stalls or yards, we deprive them of their natural exercise, and interfere with their natural habits. To enable our stock to thrive and fatten under such restraints, we are compelled to aid them in various ways; the most usual being the application of food in a partially prepared state, by grinding, or breaking it into parts, that it may be more easily digested. Various trials have proved the efficacy of this system; for instance, two milch cows were stalled and fed as follows, for five days, on *whole* barley, with grass, and yielded one hundred and eleven pounds of milk. The same food was continued with regularity for five days longer, and the milk decreased ninety-seven pounds. The same cow at another period was fed on *ground* barley, with grass and some hay, and produced during the first five days, one hundred five and a half pounds of milk; in the next five days she gave one hundred and five pounds, and being continued on the same *ground* feed for five days longer, the milk increased to one hundred and ten pounds. The results from the second cow were similar.

It cannot be necessary to multiply like cases, for the truth is very generally understood, that all food when bruised or ground into meal, is better for our stock than in a whole or unbroken state.

This leads us to inquire how we can grind or break the food with most economy. The expense of sending to a distant mill is a serious impediment, detaining a man and team the greater part of a day. The small steel hand-mills wear too rapidly. These difficulties have caused the production of various contrivances for grinding grain by such horse power as most of our farmers can command.

Both Hussey and Sinclair, of Baltimore, have machines for grinding corn and cob together for feed; but we are not yet decided as to the economy of using the cob; for my own part, having tried it for two successive years, I am rather disposed to abandon it; yet we should wait the coming of the several analyses of the corn plant now in progress, before we relinquish it.

In Massachusetts, a small run of stones has been so arranged as to grind grain or bruise it for food, and it has many advocates. The most perfect machine however, as yet produced, is the mill patented by Fitzgerald, and now manufactured in New-York by Charles Ross & Co. Many are using this small mill on their farms with advantage, in various ways; for its ingenious and simple construction, enables the farmer to break or grind any of his grains for feed; or at pleasure, he can reduce them to the finest meal for his family use. Another advantage is that, he may grind every *grass seed* or seed of every *weed* which finds its way into his barn with the grain, which being separated by the fanning mill, and ground in this small mill, affords a highly nutritious food for stock, while it destroys, and thus prevents the propagation of foul weeds. Here then is the means by which a systematic feeding of our stock may in its season be rigidly carried on. The power of two horses is necessary for these small mills, and every farmer can best make his own calculations as to the economy of the system, which must be governed by the size of his farm and the number of his stock. Agricola. *Seneca County.*

Shall we kill Moles?

We have had several inquiries relative to the best modes of destroying these animals, and have in former numbers given descriptions of traps most approved of for that purpose. The question, however, has been raised, whether it is for the interest of the farmer to destroy moles? Their chief food is insects, and it is to obtain these, that they burrow in the ground, and throw up little hillocks of earth, in which latter act lies the offence for which their lives are taken. Our acquaintance with the habits of this animal is not sufficiently intimate to enable us to say whether the good which he does to man preponderates over the evil; but we would recommend the following extract from a late number of the *North British Agriculturist*, as calculated to lead to proper observations.

James Hogg, better known by the cognomen of the "Ettrick Shepherd," in an interesting paper published in the *Quarterly Journal of Agriculture*, appears to be amongst the earliest advocates for the preservation of moles, a view also entered into by the Editor of that Journal, who questions whether the mole may not be a very important friend to the farmer. "This is by the destruction of grubs, wireworms, and the like. It is known that the mole is a very voracious creature. He subsists on worms and the larvæ of insects, which he finds under ground, where no other enemy can reach them; and, at night he sallies forth and pursues his prey on the surface. It is probable that he then destroys a vast number of grubs and other creatures, whose ravages would all be felt in their season. Can it then be that in destroying the mole we are guilty of the heedless destruction of a friend? The matter is worthy of more consideration than it has, perhaps, yet obtained. We think that a strong case has been made out in favor of the 'blessed little pioneer,' by our ingenious and kind hearted correspondent; and that in all the pastoral districts of the country, a verdict of 'not guilty' may be brought in in favor of the long-enduring mole. Let us hope, then, that henceforward he may be suffered to live in peace, and die of old age, in all the sunny glens and green sward knolls of Yarrow. But what will the insulted gardener say to this our care of his ancient enemy? 'He is a thief, he steals my acorns by the bushel, destroys my onion beds, and roots up my tulips.' Alas for the little culprit! Within the limits of the ravaged garden, we fear we must give him up to the vengeance of the trap. But on the wide spread surface of the fields, where there are no onion beds to ravage, and no tulips to be laid waste, and where little space is yet left for the denizens of nature to breathe and sport in, is it quite certain that all the mischief which the little mole works to our turneps and our mangel wurtzel is not paid to us with usury, by the prodigious multitude of larvæ and destructive insects which he consumes?" Several writers, within these few years, in the *Gardeners' Chronicle* and *Gardeners' Journal*, have taken up views favorable to the preservation of the mole, and even have gone so far as to purchase them at so much per head, and turned them out on their own lands.

It is no doubt, testing the temper of the enthusiastic florist in no small degree to find that this industrious engineer has, during the night, driven a tunnel through the centre of his tulip bed, and, peradventure, has upheaved a favorite prime Bagnet or Byblomen; still, it is very questionable whether, had not the mole taken that direction, no doubt in quest of food, that the wireworm or grub might not have done him triple the injury. In fields, we are persuaded of their advantage, and even in gardens we have ceased to disturb them; for were there not insects for them to feed upon, they would leave us and go elsewhere, and wherever moles abound there also abound the wireworm, a much more destructive enemy.

The farmers in Belgium are averse to their being destroyed, and probably the most unpopular act in our own life was the introduction of English mole traps into that country; and although upon a royal domain and at the command of majesty itself, all our endeavors to extirpate them proved unavailing, and the habits of a gardening and agricultural people were yielded to as an act of expediency.

In the gardens at Dalkeith there are two borders of equal size, in one of which a trap-bitten mole, (for when once nearly caught they are exceedingly wary afterwards,) had taken up its abode for nearly a year, and out of which it could only escape by coming up through the surface, as the foundation of the wall along one side with a large main drain under it, is six feet deep, the solid gravel natural to the soil being ten feet deep under the walk, formed the other side and ends of the border. The means of escape are at one end of the border, and, from the appearance of the hole, it is pretty frequently used; and by this we conclude that the mole passes out at night in quest of food on the surface around, and by it retreats again in the morning. Formerly both borders were so over-run with wireworms, that the crops were destroyed. In both we have this season set traps of sliced potatoes fixed to the end of wooden skewers, and have set an equal number, and at a depth of from three to four inches in each. These are examined by a person we have the highest confidence in every three or four days, and the result is—in the border inhabited by the mole, only two wireworms have been detected, while in the other, the total number taken at three examinations was 6360, the number of traps being 106; average number at each trap being 20, and at one taking 2120.

Comparative Profits of Free and Slave Labor.

In reply to the inquiry of "A SOUTHERNER," we published last month the remarks of "A NORTHERNER." Having thus opened our columns to the subject, we are desirous of treating it with fairness, and therefore insert below, two other communications; with which,—as the most important points seem now to have been brought out,—we close the discussion.—EDS.

EDS. CULTIVATOR—In the May number of *The Cultivator*, "A Southerner" asks for information on the subject of labor. Whether it would not be more profitable to employ free labor than slave? Another Southerner undertakes to answer the question promptly and unhesitatingly in the negative. There is no labor in this country so cheap as slave labor. There is no labor in this country so well adapted to agriculture, particularly on large farms, as slave labor.

"Southerner," on his farm of 1200 acres, could not afford to employ free labor at all; without he changed his cultivation of grain and converted his land into pasturage. He has 800 acres arable land. If he cultivates the four shift system, he has 200 acres in corn, 200 in small grain, and 400 acres in grass. To cultivate this quantity of grain, it will require from 15 to 20 field hands. He has the labor on his farm, and owned by him, and it is kept up perpetually by the natural increase of his slaves, so that it costs him nothing after the first purchase, but to feed and clothe them. There is no labor he could obtain so cheap to him.

Let us suppose "Southerner" instead of owning the slaves, (which is a decided advantage) had to hire them. Say 20 field hands, men, boys and women, were to be hired. They could be had in Virginia at an average of fifty or sixty dollars per year, deperding of course upon the proportion of men to women. The men being worth more. Twenty hands at fifty dollars would cost,

would cost,	$1000
Clothing and taxes,	200
Food,	400
	$1600

There are no physicians bills to be paid by the hirer, as they are paid by the owner.

Let us see now how it will be in estimating the cost of free labor. According to the Patent Office Report, which is held as good authority in such matters, field laborers are worth in Massachusetts, and several other northern states, from $10 to $12 per month. We will suppose 16 men to perform as much labor as 20 mixed hands. It will stand thus:

16 hands at say $11 per month, being $132 per year,	$2112 00
Cost of board, say $50,	800 00
Being cost of free labor,	$2912 00
do of slave labor,	1600 00
Difference of cost,	$1312 00

Thus it will be seen, that free labor will cost four-fifths more than slave labor, where each kind has to be hired. But where the farmer owns the slaves on his farm the difference is much more more decidedly in favor of slave labor.

"Southerner" says he has "a great deal of trouble, vexation and solicitude, on account of my (his) dependants." I can assure him that he will not find any situation in life free from its troubles and vexations. And I am decidedly of the opinion that there is as little trouble and vexation in the management of slaves as any other kind of laborers whatever. Suppose he were to substitute free labor for the labor of his slaves. Where would he obtain it? Necessarily from Ireland, as being the next cheapest to slave labor. Now I would ask him if he would not greatly prefer the management of twenty negroes on his farm, to the vexation and trouble of twenty Irishmen? I am sure he could not hesitate in his decision.

"Southerner" says, "we frequently see it stated in northern papers, that free labor is more profitable than slave, and that if southern people were to liberate their slaves, they would be more prosperous and happy." This is a very great error on the part of the northern people. The south is the most prosperous country in the world, and I presume equally as happy as any other people.

Its prosperity is mainly produced by the existence of slave labor. Without that species of labor, its fields would not be tilled, but suffered to be overrun by rank and poisonous weeds. The vast amount of agricultural products now annually exported from the south, would not be produced. Our northern brethren would be deprived of the great profits derived from their shipping and manufacturing interests. And the slaves themselves would be a wretched set of beings. As they are situated at present, they are the best fed, best clothed, most happy and contented body of laborers of any in the world. To our northern brethren we would say: if you prefer free labor we are perfectly satisfied with your choice. But as we prefer slave labor, all we ask of you, is to mete out the same measure to us, and let us alone. A VIRGINIAN. *Mathews Co., Va.*

EDS. CULTIVATOR—Having read in the May number of your paper, what appears to me to be a very honest, interesting, and intelligent inquiry in regard to free labor, from the pen of "A Southerner," and considering that it merits a careful and faithful answer, I thought I would furnish you a few remarks in regard to it.

The object the gentleman has in view, is certainly a most laudable one; for it is impossible to conceive of a more noble desire, than that for the mutual improvement of the condition of himself and those around him. That he may receive such information as will assist him in the execution of his wishes, is my most fervent hope; and if these lines contain ought that is of value to him, I shall have attained my object.

I am sanguine in the belief, that by a judicious introduction of free labor, he will greatly diminish his "vexation and solicitude," as well as increase his annual income. A laborer, who feels that he is receiving a full compensation for his exertion, has a stronger and more powerful stimulant to activity than it is *possible* to present to the slave. Hence, the latter is characterized by his lethargic movements, and indolent habits,—evincing a total disregard for the interests of his master, and I imagine is, in some cases, a source of expense, rather than profit. And there can be no doubt that the intelligent and educated laborer is far superior to the ignorant, and much cheaper, even at a greater salary.

The experience of all those who have employed laborers of both grades, I am confident, will speak in affirmation of this opinion. But the most judicious manner in which the gentleman in question can substitute free, intelligent workmen, for his slaves, is a matter that cannot be decided without the most serious and thorough reflection. Whether he had better attempt to transform them into free laborers, or dispose of them either by selling them to southern planters, or giving them their freedom, and introduce free white labor from the north, is perhaps difficult to determine. I am satisfied that the adoption of either of these measures would be conducive to *his* interests. I would advise him to make some experiments, and give the results to his southern brethren, many of whom are similarly situated, and would be grateful at their reception.

I am of the opinion, however, that he will meet with more satisfactory success by disposing of his slaves as he best can, and bring free white laborers from the north. I doubt not, that he would hesitate selling them to the planters at the south; still I consider it preferable to the course he is at present pursuing. If he be an individual of fortune, and would not suffer any inconvenience from the loss of his slaves, I scarcely need remark that the purer feelings of his heart would at once dictate him to free them, when they are of a proper age.

Let this be as it may, at any rate dispose of them.

The number of free laborers required to till a farm of his description, in a manner decidedly superior to that at present, and with far more lucrative results, would not exceed twelve.

The foreman should be an individual of intelligence and education, and would demand a salary of $350 per year. The others, $125 each, most of whom might be sons of the Emerald Isle. This would make his annual expenses for labor on the farm $1725, which is no inconsiderable item, and may at first appear rather startling. But if we take the interest of the money invested in slaves, it will reduce this somewhat. He says there are some 60 or 70 around him, most of whom are slaves. Now, allowing that 56 are slaves, and supposing their average value to be $250, (I am unused to such estimations, therefore may be greatly in error, but think this low enough,) he will have $14,000 invested in slaves, the interest of which, at 6 per cent., would be $840.

Besides this, the number he will have to support will be reduced from 60 or 70 to 20 or 30, therefore the board of 40 will be saved, as well as the clothing of all, excepting his own family. The 40, at 35 cents per week for board, would cost $728 per year; and it is probable that the clothing averages $4 a-piece the year, which for the 56 would be $224.

Adding these items together, we find that his slaves cost him $1792 a year, which sum exceeds the enormous amount that free labor would cost, by $67. If the estimates were more accurately made, doubtless the difference would be far greater in favor of free labor. If this be the result, it might be asked, how would the gentleman's condition be materially improved? I answer; the number of attendants around him would be vastly diminished, and his "care and vexation" proportionally reduced. But besides this, he would with his free labor, adopt a new and improved system of agriculture, by which means the produce of his farm, would be doubled and tripled; and the fields that are already waning under that ruinous system of culture that will eventually prepare them for augmenting the list of "*Virginia worn-out lands*," will be rescued and restored to their pristine fertility, by that more recent method of tillage, that causes even the granite hills of New England to smile with luxuriant verdure.

In regard to the question whether grazing stock for market or cheese-making is more profitable, I would say that it depends entirely upon the situation and circumstances. I do not recommend that the whole energies of any farm, (unless it be a very peculiar one,) be devoted exclusively to the production of any one article; for not unfrequently, one branch of husbandry meets with reverses when others are prosperous. Therefore, it might not be improper for him to devote a portion of his farm to the grazing of stock for market, and another to the dairy. A good dairyman could be obtained for $300 per year. The necessary fixtures for cheese-making, could be erected for a sum varying from $250 to $800, depending entirely upon their extent and economical construction.

Hoping that the gentleman will conclude to deviate from the time-beaten track of his ancestors, and free himself from the thraldom of slavery, which is twofold more injurious to the master than the slave, I cordially tender him my most sincere wishes for his success. P.

Germantown, Pa.

Mineral Cements.*

Roman Cement.—It is a remarkable fact, in the history of hydraulic mortars, which originates, as we have seen, with the Puzzolana and Trass† employed by the Romans, that the more the knowledge of their uses has been spread, the more substances have been discovered, which either act as hydraulic mortars themselves, or can be mixed as cements in the preparation of artificial mortar; so that what appeared originally a privilege accorded to a few favored spots only, can now be obtained almost everywhere. A strong inducement to study the nature and modes of occurrence of hydraulic lime, was created by the patent granted to Parker and Wyatt, in London, in the year 1796, for what they termed "*Roman cement*." The materials employed in the manufacture of this cement, are the nodules, of an ovoidal or globular form, which are found in the London clay, and known by the name of Septaria. They are not confined to the banks of the Thames, but are also found on on the isles of Sheppey and Wight, as well as on the coasts of Kent, Yorkshire and Somersetshire. The composition of these nodules has already been given. They are calcined in perpetual lime-kilns with coal, in which a very moderate and well-regulated heat is carefully preserved. After calcination, the stones are ground under heavy edge-stones to a very fine powder, which is sifted and then packed in casks for sale.

In the year X of the French Republic, Lesage pointed out the existence of similar cement stones on the coast of France, near Boulogne, and Drapier proved their identity with the English, by chemical analysis.

Roman cement is one of the most powerful hydraulic mortars, and is exceedingly valuable, not only on account of the rapidity with which it hardens, and this is effected in a very few minutes, but because when hardened in considerable masses, it is not liable to crack.

Since that time, similar calcareous marls have been found in numerous places, wherever pains have been taken to look for them, and have been used for similar purposes. To give an instance of this, Kittle in Aschaffenburg, examined a series of limestones from the Spessart, and found in four different places in the neighborhood, limestone, which yielded a very tolerable mortar, and two varieties which were excellent. Hydraulic lime has occasionally been met with in the same quarry as fat lime; and its nature not having been investigated, has been neglected as useless in consequence of the slowness with which it is slaked.

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* From the second volume of Johnson's edition, of Knapp's *Chemical Technology.*

† Puzzolana and Trass, are porous volcanic, or pumice stones. Eds.

All artificial or natural hydraulic limestones are soluble (before as well as after calcination) in muriatic acid, with the separation of silica, except when sand or some similar substance has been added to them.

Practical Remarks.—The hydraulic limestones, when they do not contain a sufficient quantity of lime to be capable of slaking with water, must be very finely pulverised; it is only by this high state of division that a proper action can ensue. A thorough penetration of the siliceous portion by the lime is never entirely effected, but a certain proportion remains enclosed and removed from the sphere of action.

One point, which is very often neglected in preparing artificial hydraulic mortar, is the attention to the proper proportion between the slaked lime and cement. Both the ingredients must be mixed by measure or weight, and not merely estimated by the eye.

The best plan is to moisten the necessary quantity of cement first, and then mix the freshly slaked lime with it. The more uniformly and intimately both are mixed, the better is the result.

The hydraulic mortar employed in building the Eddystone lighthouse, was mixed by Smeaton from equal proportions of lime, slaked to powder, and Puzzolana. Trass and Puzzolana are generally mixed with half their weight of lime, as was the practice amongst the Romans. It is desirable to ascertain the best proportions by experiment in all cases where no certain knowledge of the nature of the two substances can be obtained.

Good hydraulic mortar, whether made from natural limestone or composed of lime and cement, should not show any tendency to crack when hardened under water, even when no sand is mixed with it. It then forms a very dense and solid mass, which, in a short time, neither suffers water to permeate it, nor is attacked by the water, but acquires a considerable degree of hardness. For this reason, it is well to use nothing but hydraulic mortar for those parts of walls which are constantly under water. If the mortar is not only required to harden, but also to bind well, a very important point must never be neglected, and that is to moisten the surfaces of the stones to which the mortar is to be applied. When this is not done, the surface of the stone (by its power of absorbing moisture,) dries the mortar and prevents proper adhesion from taking place. The joint then remains open to a greater or less extent.

It does not by any means follow, that because hydraulic mortar is the only durable material for building under water, it cannot consequently be used for dry walls. It is, on the contrary, of the greatest service wherever protection is required against the infiltration of moisture and damp; and dwellings or buildings can often be rendered very much less damp by a judicious application of a hydraulic coating; a layer of this kind, when once hardened, is not calculated, like ordinary mortar, to attract moisture and allow it to pass through. The hydraulic mortar must, of course, when used for covering dry walls or otherwise, be kept moist and watered, until it has acquired its proper degree of hardness. If this is not attended to, a soft, friable, useless coating is the certain result. If moisture enters from below, for instance, between the wall and the coating of mortar, it will continue confined there in consequence of the impenetrability of the latter, which, on the occurrence of a frost, will most certainly peel off and be destroyed. Care must also be taken that the mortar does not dry up of itself immediately in the air, in which case it contracts and cracks. It is, therefore, necessary to add sand or some other substance which obviates the shrinking. Hydraulic mortar will bear a very considerable quantity of sand without injury to its hardness, even as much as one and a-half times its own weight and more. This addition therefore, is important in an economical point of view. The grain of the sand employed, however, requires attention, as was the case with ordinary mortar; sharp, angular sand is decidedly preferable to blunt, rounded sand, and it is better to use a mixture of coarse with fine sand, than that the sand should be all of the same sized grain. The sand should likewise be as free as possible from earthy particles and dust. In mortar composed of lime and cement, the rule is, to proportion the sand to the quantity of cement used. Slaked lime will not bear more than a certain quantity of these substances, which quantity must not be exceeded, the cement itself being for the greater part inactive and playing the part of sand.

Hydraulic mortar that sets with sufficient rapidity, and to which a proper proportion of sand has been added, may be employed for casting tolerably massive objects, which are not subject to crack when dry. This enables hydraulic mortar to be employed for architectural ornaments which then combine great sharpness with durability, are very light as compared with similar figures of sandstone, and have the great advantage of being easily multiplied.

A similar application is that for casting water-pipes, on the spot where they are required, as proposed by Gasparin. The mould employed is a linen hose, like those attached to the fire engines, a few meters in length, which is filled with water and closed at both ends. A thick kind of bolster is thus produced, over which sand is sifted, and it is then laid upon a deposite of hydraulic lime and covered by pouring over it the same substance. When the whole has hardened, the hose is drawn forward, about the length of one foot, being left inserted in the tube, and a fresh length is cast. Water courses, thus constructed, must however, have a certain amount of fall, or the sand cannot be washed out, and will impede the delivery of the water.

When hydraulic lime is mixed with small stones, or with shingles from the bed of a river, or the sea, walls can be directly constructed of it, and a mass is obtained which resembles the erections with ordinary mortar, and is called *béton* by the French.

At Toulon, a mixture was used for the construction of the harbor, consisting of 3 parts lime, 4 Puzzolana, 1 smithy ashes, 2 sand, and 4 parts of rolled stones or shingles.

The great strength of walls, constructed with hydraulic mortar, is most clearly shown by the experiments undertaken with a view to break beams constructed of brickwork. A 25 feet long, and 2½ feet wide beam, constructed with 19 layers of bricks, bound together by Roman cement, in which, here and there, parallel strips of iron were enclosed, was capable of bearing, when supported at both ends, a weight of 22 tons suspended from the middle, before it showed any signs of fracture.

Shoeing Horses.—At a meeting of the Royal Agricultural Society of England, Professor Sewall remarked, that he frequently found old horses shod with a layer of leather, forming an artificial sole between the hoof and the shoe, recovering from severe affections, causing injury to the hoof—such, for instance, as contraction, brittleness, and cracks, or even diseases of the foot itself, as thrushes, corns, cankers, etc., and permanently regain their original elasticity and firmness.

TABLE

Exhibiting the Composition (expressed in pounds and decimals of a pound) of several kinds of Grain and Vegetables.

In answer to several inquiries, we are enabled to offer the following table, prepared by Mr. J. H. SALISBURY, who will please accept our thanks for the favor. Mr. S. informs us that the composition of the oat was calculated from analyses made by Prof. Norton; that of the barley, millet, and inorganic part of the sweet potato, from analyses made by Prof. Emmons.

	Winter Wheat grain.	Rye Grain.	Two-rowed Barley grain.	Oat grain. Hopeton.	Millet grain.	Buckwheat grain.	Grain of the Rhode Island Sweet Corn.	Grain of the Tuscarora Corn.	Grain of the Chinese tree Corn.	Tuber of the Mercer potato.	Tuber of the Sweet potato.	Drum Head Cabbage.	Fruit of the Large Red Tomato.	Fruit of Egg Plant. Oval-shaped purple.
	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain	1000 lbs. contain
Starch,	613.300	527.50	330.71	656.40	337.30	415.50	149.918	459.6706	485.3941	96.50	184.23			4.9220
Albumen,	44.720	24.40	32.48	4.60	80.24	65.50	120.739	77.9791	69.8789	2.49	54.47	17.40	1.631	3.4383
Coagulable Albumen,		22.00				96.70	2.186	1.2077	12.2024		19.40	8.80	2.851	12.1465
Casein,	2.730	4.00	17.02	158.60	46.66	7.80	24.467	1.6527	1.6661	4.69	9.70	3.60	1.805	2.6967
Gluten,	44.600	11.30	20.29	24.80	40.40	26.00				2.06				
Zein,							34.137	44.5964	34.6025					
Tartaric, citric and malic acids,													28 948	
Sugar and Extract,	115 750	80.30	56.62	45.60	98.66	60.10	193.216	87.7285	92.9026	26.34	63.49	92.20		40.9960
Oil and Fatty matter,	10.600	63.80	19.15	54 90	20.00	4.70	91.731	46.8900	36.6094	0.84		1.60		
Wax,													4.769	
Dextrine and gum,	24.000	20.40	63.16	21.20	40.80	16.00	114.483	36.6605	38.2632	12.68	6.93	10.90	8.806	4.9889
Fiber,	34.100	111.40	175.91	11.90	195.65	140.90	118.973	107.3075	106.6012	57.50	17.09	30.90		10.2476
Chlorophyl, with a little starch,														
Bran,			140.50											
Gum resin,											2 07			
Water,	92 ·60	124.00	108.18		107.28	128.80	136.690	122.2000	113.6000	791.09	641.72	826.20	947.58	913.5300
Amount of organic bodies and water,	983.50 lbs	989 70lbs.	964 .lbs.	978.lbs	966.lbs.	964 lbs	977.4 lbs.	984 8 lb	985.2 lbs.	994.01 lbs.	989.10 lbs.	991 60 lbs.	996.59 lbs.	993.96 lbs
Carbonic acid,													0.3817	0.2889
Silicic acid,	0 309	0.392	8.64	0.42	15.63	0.72	0.256	0.1178	0.2636	0.25	0.24.	0.06	0.0696	0.1036
Sulphuric acid,	0.162	0.495			trace.	0.57	0 125	0.1938	0.1694	0.36	0.16	1.12	0.0611	0.2896
Phosphoric acid,	8.856			11.06		18.19	16.177	6.8586	7.3109			1.27	0.8461	1.7595
Peroxide of iron,				0.19										
Phosphate of peroxide of iron,		0 668	15.14		12.19							0.12		
Phosphates of lime and magnesia,		3 635								2.28	2.78			
Phosphates of potash and soda,		0.694	5.88		0 22									
Lime,	0.009	0.707		1.29		1.11	0.076	0.0599	0.0918	0.01	0.08	0.29	0.0096	0.0046
Magnesia,	2.703	0 127		1.96		5.67	2.654	1.9670	2.4075	0.04	0 07	0.35	0.0549	0.0828
Potash,	1.302	1.922	4 86	7.10	2.53	7.76	2 966	2 2045	1.9212	0.78	6.37	2.09	0.7191	1.2496
Soda,	3.075	0.938	1.98		2.91	0.86	5.301	3.2089	2.2649	1.45	0.66	3.02	0.8899	1.9525
Sodium,	0.033												0.0952	0.0696
Chloride of sodium,		0.076		0.08						0.67				
Chlorine,	0.051				trace.	0.12	0.061	0.0654	0.0851		0.54	0.08	0 1472	0.1057
Organic acids,		0.694			0.52	1.01	0.684	0.5361	0.3066				0 1576	0.1341
Amount of inorganic bodies,	16.500 lbs	10.3 lbs	36.lbs	22.lbs	34.lbs.	36.lbs	22.6 lbs.	15.2 lbs	14.8 lbs	5.79 lbs.	10.9 lbs.	8.4 lbs.	3.41 lbs.	6.04 lbs
Total,	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.	1000 lbs.

Improvement of the Soil.

Renovation of Lands.

Eds. Cultivator—It appears as though there was an absolute ignorance amongst farmers, of the relative value of the various kinds of manures; and especially so amongst those whose means enable them to have acquired the most accurate information. Is there any one who can even tell us how much more he will raise from an acre of land manured with six cords of stable manure, throughout a course of farming for four or five years, than he would from the same land not manured at all? Can any one tell what increase will result from liming land? Or can any definite result be predicated from the application of bones, poudrette, guano, or any of the various kinds of fertilizers now in use? That the application of these various manures will produce a great effect is known to us all; but which will soonest repay the cost, which last the longest, or which will best suit the various kinds of soils, is as yet a mystery to the generality of farmers.

But enough of this carping and fault-finding. And that I may practice as well as preach, I will give you a short history of some of those who, I think, have pursued the true system; even though, according to some learned Thebans, it is one that will not pay.

Nearly twenty years since, there was a farm of about sixty acres, so poor as almost to defy description. The best comparison I could give, would be some of the worn-out, or as they call them, the "tired lands" in the southern states. The owner was a young lady, and she attempted to manage the farm when it came into her possession, in the same manner as it had been managed by those from whom she inherited it—without having any pecuniary means, other than its resources. She hired a farmer, and for some years they plowed and re-plowed the same worn-out and exhausted fields, and gathered in the same poverty-striken crops, which had been gathered in, "from a time beyond which the memory of the oldest inhabitant runneth not to the contrary." The result was as all foretold, she was compelled to quit farming. Amongst her creditors was her farmer, I believe almost the only one of any magnitude, and to *pay him off* she married him,—at least so the story went. Again they started fresh with the world; but still it would not do. The same incubus was pressing upon them. They toiled early and late, lived prudently and economically; but notwithstanding all, they could not make both ends meet, and were fast coming out of the little end of the horn. Their true friends urged them to raise money on the lands and improve it, so that at least, they might be paid for their labor; but this, although the only true policy, was a policy running counter to all their preconceived opinions. They said, as others before them have said, it would not pay. At last they did what under the circumstances, and with their views of policy, was perhaps the only prudent thing they could do—they sold the property.

It was purchased by a hard-working practical farmer, one who had previously had some experience in renovating worn-out lands. The price given was, I think, sixty dollars per acre,—hardly the value of the buildings upon it. Instead of doing as his predecessor had done, he mortgaged it, for a part of the purchase money, and took the balance of his means to improve the soil. In order to effect this object, he hauled stable manure from the city of Philadelphia, a distance of ten miles, for which he paid about three dollars the two-horse load; that is, what two horses could draw on the pavement, and three or four off. I cannot give the quantity he put to the acre; I think it was five or six of these loads. He continued this practice for some six or eight years, at the end of which period, he was offered more than twice what he gave for the farm.

It is hardly necessary to say, it was then a farm of altogether a different character. Old fields, which formerly produced nothing but sorrel or moss, were then verdant with the richest grasses, or covered with the most luxuriant crops; old fruit trees, which had been, under the former owners considered as almost worthless, then sprung into new life, and brought forth excellent fruit. And everything, both animal and vegetable, betokened prosperity and abundance. All this was effected, mark you, whilst at the same time, the owner was yearly making his living from its proceeds. It has been but a short time since his son told me, they made money faster then, than at any other time; "because," said he, "although we did not lay by any money, yet every year our land was becoming more and more valuable. The owner, now an old man, is living independently and comfortably; he has the fattest horses, the best cows, and the finest crops of any one around him.

In my last communication I mentioned an Englishman, who farmed Mr. W.'s farm. He is one of my standing examples of the benefit of this system of farming. About ten years since, he, then a hired farmer, leased from a Mr. S. in Philadelphia, who kept a livery stable, a miserably poor farm, with a bleak northern exposure, on Chestnut Hill, near Germantown. The conditions of the lease were that Mr. S. was to find the manure, and that Mr. H. (the farmer,) was to cart it to the farm. He had saved from his hard earnings, a few hundred dollars, barely sufficient to purchase a few of the most indispensible farming implements. You can judge how limited his resources were, from the fact that the loss of one of his horses threw him on his "beam ends," until his friends advanced him money to replace his loss. But he boldly met the disheartening circumstances of his situation; and, as he afterwards told me, it was as much as he could do, with the most rigid economy, to keep himself from sinking. To use his own words:—Whenever he could get a day's work for himself or his boys, from his neighbors, he took it, and thus earned a little money for his family, and when he could not, he would haul up a load of manure from the city. When I last saw him, some three years since, he was surrounded by all that a farmer could desire; his yard was stocked with fine cattle, his horses were excellent, and in fine condition; his implements were good, and in their places; and to sum up all, he had the appearance of being a forehanded farmer, and one "well to do" in the world. It really made my heart glad to see this man, whom I had known, as a stranger in a strange land, and toiling day by day for his daily bread, now comfortable, independent and happy; and taking rank in his social position, with those who form the most numerous and respectable portion of the community.

A farm, which is, perhaps, the very best in this county, was made so, by following the method I have pointed out. Many years since, Mr. C., who had been an orphan boy, had some money left him by the person who brought him up. With the money, he purchased a piece of land about eight miles from the city, containing about thirty acres. When he purchased it, it was thin, and if not in the lowest condition to which it might have been reduced—yet too poor for any one to make money from it by farming in the usual manner. He, also, pursued the same system, and though some may have deemed him unwise, the result was, he made his living from the land, whilst at the same time he was changing its appearance. It would be fruitless to attempt any description of the high degree of fertility to which it has now been raised. You can form some idea of its productiveness when you learn, that for years past, he has been putting by his five hundred or a thousand dollars a year, clear money, after all his farming expenses have been paid. Nor does he live in a miserly manner; but on the contrary, is rather famed for his liberality in household matters. It is a fact well known in the neighborhood, that he raises as much from this small lot of land, as is raised by the average of those who cultivate their hundred acres. This result has been produced, solely by the use of stable manure. He keeps no fancy stock; he pursues no different routine of cultivation from that pursued by others around him; but he manures his lands without stint.

If it were not that it would be trespassing on your columns, and on the patience of your readers, I could give you instances by the score, where some, who have not been afraid either of the labor or expense of doing as those I have mentioned have done, have succeeded in renovating their worn-out fields, and are now living comfortably upon the income of their productive farms. And where others, who were afraid it would not pay—that the price of the manure was too high,—the labor of procuring it too great, have continued in the same situation in which they were when they first started out in life. Pennepack. *Lower Dublin, Pa.*, 1849.

New-York State Agricultural Society.

State Fair.

We make the following abstract of the report of the Executive Committee, at the meeting of the Board, July 12th, 1849.

The secretary reported that since the last meeting he had visited Syracuse, and that the citizens are taking active measures to prepare the grounds and buildings for the use of the society in September. A contract for enclosing the grounds, and preparing the necessary erections, has been made with an efficient and thorough business man, and everything required by the Society, it is believed will be in readiness. The committee of arrangements on the part of the citizens, are making every possible effort for the accommodation of visiters, and nothing on their part will be left undone to accommodate those who may be in attendance.

The secretary also reported, that the judges who had been appointed for the annual exhibition, had with very few exceptions, signified their acceptance, and the few vacancies had been supplied by gentlemen who had agreed to be present. At no former period have the indications of a large exhibition in all the departments, been so encouraging as at the present.

T. Ewbank, Esq., Com. of Patents, in answer to an invitation to attend the Show and Exhibition at Syracuse, writes:—" An occasion so peculiarly attractive to those who watch with interest the progress of agricultural improvement,—a subject, the vast importance of which it is scarcely possible to magnify—could not fail to afford me the liveliest gratification—a gratification which, with what sincere regret I need not say, my official duties will, I fear, compel me to forego.

" I shall derive much pleasure, however, from reading reports of the Exhibition, which will, in some measure, atone for the disappointment I feel in not being able to meet personally, the many intelligent gentlemen who will assemble from various parts of the country, upon so interesting an occasion."

The Crops. &c.—N. Goodsell. of Rochester writes: That he had visited several counties of the north, and that considerable portions of Jefferson, Lewis, and Oswego counties, are becoming rich in agricultural products—some of the best dairies and finest stock are found in the above districts; but there is great want of information respecting our State Agricultural Society's proceedings. Many farmers with large dairies. have never attended a State Fair. I obtained from one nearly a full promise that he would take a wagon load of butter and cheese to Syracuse. Much of the country in these counties is very fine for grass, oats, barley, Indian corn and potatoes, superior to the major part of this State. I have made particular examination of the extent of our Peach district, east, and find it reaches upon the lake for six miles back to Salmon river, lowest range of thermometer 8° below 0, in all of which territory trees are as healthy, and as well filled with fruit as at Rochester. Two miles north of this line the thermometer falls 20° below 0°.

R. Howell, of Nichols, Tioga county, says, date 26 June, the weather for the last week, has been as dry and warm as any ever experienced here. Spring was very late, cold and dry, particularly the month of April. The 14th of the month the ground was so dry that it was scarcely possible to plow—and a week from that time so cold that the plow was frozen in the furrow. On the 17th it snowed, and on the hills snow was 16 inches, and half that depth on the flats. The crops now look fine, wheat is of fine color, large growth. It was feared that the Hessian fly had committed ravages upon the crop—but I cannot find any signs of the fly. In some grounds, injury has been caused by a grub eating off the large roots of the wheat. Rye much better than usual. Corn and oats are good, though backward. Grass is very heavy, especially new meadows.

John Johnston, Esq., of Seneca county, one of our best farmers, writes, June 25th, " I have made nearly 1500 rods of tile drains since you was here last fall, (in Sept.,) and am carrying on farming more thoroughly than ever I did; but am warned by age and infirmity that I must do less. I fattened 83 head of cattle last winter, have sold 62 of them, part in February and part in May, at over $50 per head—(steers 4 years old last spring.) Eighteen of these I have on hand, and they are worth over $50 each. I get well paid for my corn, hay, corn stalks &c.; and I have got such a lot of rich manure as few men in Western New-York ever made in one season.

" Some of my neighbors who said I must be a great fool to bury so much money in drains, are now ordering tiles, some 2,000, some 5,000, &c. Draining will do more to improve the agriculture of the State than all else combined. The difference in the cost of cultivating drained land, from that undrained, is very great. Drained land can be worked much earlier in spring, and the work much easier for man and team. *One plowing* will pulverize the land better than *three plowings* when the land is inclined to wet, even if not very wet.

"I have now laid (or at least have the drains dug, though all the tiles not home yet) about 40,000 tiles since 1841. What I laid previous to that time I have no account of, but it was not many. A little over 13 tiles will make a rod, of course, I have laid a great many rods for an American farmer. I think I have about half done what I intend to do; if I have tolerable health, I can, in three years, lay 40,000 tiles, and there is no difficulty in obtaining men to dig the drains."

" Mr. J. says:—" The weevil (wheat midge) has made its appearance among our wheat crops, more especially in the east and north of our county, immediately in this neighborhood. I think there will be no serious loss this season."

A letter from John Delafield, Esq., President Seneca Ag. Society, gives us the agreeable intelligence that the efficient society of that county, have passed a resolution inviting Prof. Johnston to deliver their annual address on the 5th of October next. Mr. D. also writes that it is probable the society will, if practicable, secure Prof. Johnston to deliver them a course of lectures on agriculture.

[We are much gratified by this movement on the part of this Society. It shows that the right spirit is abroad, and that the farmers of this small county are alive to their own best interests. It is to be hoped that some of our larger counties with funds idle in their treasury, will make a like arrangement, which will return tenfold more to their societies, in the benefits to agriculture, than the small amount required to secure the services of Prof. J.]

Letters were read from the officers of several Canadian Agricultural Societies, from the officers of the Board of Agriculture of Ohio, and from the societies of other states, giving notice of the appointment of delegates to attend the exhibition and fair of the N. Y. State Society, at Syracuse.

The Veterinary Department.

Spaying Cows.

At the request of a correspondent, we give the following extract, in regard to the operation of spaying cows, from a lecture of Morin, a French veterinary surgeon:

'Having covered the eyes of the cow to be operated upon, we place her against a wall, provided with five rings firmly fastened, and placed as follows:—the first corresponds to the top of the withers; the second to the lower anterior part of the breast; the third is placed a little distance from the angle of the shoulder; the fourth is opposite to the anterior and superior part of the lower region, and the fifth, which is behind, answers to the under part of the buttocks. We place a strong assistant between the wall and the head of the animal, who firmly holds the left horn in his left hand, and with his right, the muzzle, which he elevates a little. This done, we pass through and fasten the end of a long and strong plaited cord in the ring, which corresponds to the lower part of the breast; we bring the free end of the cord along the left flank and pass it through the ring which is below and in front of the withers. We bring it down along the breast behind the shoulders and the angle of the fore leg, to pass it through the third ring, from there, we pass it through the ring which is at the top of the back; then it must be passed around against the outer angle of the left hip, and we fasten it, after having drawn it tightly to the posterior ring by a simple bow knot.

'The cow being firmly fixed to the wall, we place a cord, fastened by a slip-noose around its hocks to keep them together in such manner that the animal cannot kick the operator, the free end of the cord and the tail are held by an assistant.

'The cow, thus secured, cannot, during the operation, move forward, nor lie down; and the veterinary surgeon has all the ease desirable, and is protected from accident.

'M. Levrant advises that an assistant should hold a plank or bar of wood obliquely under the teats and before its limbs to ward off the kicks; but this method is not always without danger, both to the operator and the animal, because, at the commencement, that is, when the surgeon makes the incision through the hide and the muscles, the cow makes such sudden movements, and tries so frequently to strike with its left hind foot, that it may happen that upon every movement, the plank or the bar may be struck against the operator's legs.

'On the other hand, although the defence may be firmly held by the assistant, yet it may happen, that in spite of his exertions, he sometimes may be thrown against the operator by the movements she may attempt, and there may be an uncontrollable displacement of the plank or bar; and then it may happen that she becomes wounded, and at the same time prevents the operation, while, by the mode we point out, there is no fear of accident, either to the operator or the beast.

'In case of the want of a wall provided with rings, we may use a strong palisade, a solid fence, or two trees a suitable distance apart, across which we fix two strong bars of wood, separated from each other, according to the size of the cow.

'There is another means of confining them that we have employed for some time past, where the cows were very strong and irritable, more simple than the preceding, less fatiguing for the animal, less troublesome to the operator, and which answers perfectly. It consists—

'First. In leaving the cow almost free, covering her eyes, holding her head by two strong assistants, one of whom seizes the nose with his hand and strongly pinches the nostrils, whenever the animal makes any violent movements during the operation.

'Second. To cause another assistant to hold the two hind legs, kept together by means of a cord passed above and beneath the hocks; this assistant also holds the tail and pulls it, whenever the animal seeks to change its place.

'The cow being conveniently disposed, and the instruments and appliances, such as curved scissors upon a table, a convex edged bistoury, a straight one, and one buttoned at the point, suture needle filled with double thread of desired length, pledgets of lint of appropriate size and length, a mass of tow (in pledgets) being collected in a shallow basket, held by an intelligent assistant, we place ourselves opposite to the left flank, our back turned a little towards the head of the animal; we cut off the hair which covers the hide in the middle of the flanks, at an equal distance between the back and the hip, for the space of thirteen or fourteen centimetres in circumference; this done, we take the convex bistoury, and place it opened between our teeth, the edge out, the point to the left; then, with both hands, we seize the hide in the middle of the flank, and form of it a wrinkle of the requisite elevation, and running lengthwise of the body.

'We then direct an assistant to seize with his right hand the right side of this wrinkle; we then take the bistoury that we held in our teeth, and we cut the wrinkle at one stroke through the middle; the wrinkle having been suffered to go down, a separation of the hide is presented of sufficient length to enable us to introduce the hand; thereupon we separate the edges of the hide with the thumb and forefinger of the left hand, and in like manner, we cut through the abdominal muscles, the *iliax* (slightly obliquely) and the *lumbar*, (cross) for the distance of a centimetre from the lower extremity of the incision made in the hide; this done, armed with the straight bistoury, we make a puncture of the peritoneum at the upper extremity of the wound; we then introduce the buttoned bistoury, and we move it obliquely from above to the lower part, up to the termination of the incision made in the abdominal muscles. The flank being opened, we introduce the right hand into the abdomen and direct it along the right side of the cavity of the pelvis, behind the *cul de sau-rumen* (paunch) and underneath the rectum, where we find the *cornes de l'uterus*, (matrix;) after we have ascertained the position of these viscera, we search for the *ovaries* (organs of reproduction,) which are at the extremity of the *cornes*, and when we have found them, we seize them between the thumb and forefinger, detach them completely from the ligaments that keep them in their place, pull lightly, separating the cord, and the vessels (uterine or fallopian tube) at their place of union with the ovarium, by means of the nail of the thumb and forefinger, which presents itself at the point of touch; in fact, we break the cord and bring away the ovarium.

'We then introduce again the hand in the abdominal cavity, and we proceed in the same manner to extract the other ovaria.

'This operation terminated, we, by the assistance of a needle, place a suture of three or four double threads waxed, at an equal distance, and at two centimetres, or a little less from the lips of the wound, passing it through the divided tissues, we move from the left hand with the piece of thread; having reached that point, we fasten with a double knot, we place the seam in the intervals of the thread from the right, and as we approach the lips of the wound, we fasten by a simple knot, with a bow, being careful not to close too tightly the lower part of the seam, so that the suppuration which may be established in the wound, may be able to escape.

'The operation effected, we cover up the wound with a pledget of lint, kept in its place by three or four threads passed through the stitches, and all is completed, and the cow is then led back to the stable.

'It happens, sometimes, that in cutting the muscles, of which we have before spoken, we cut one or two of the arteries, which bleed so much that there is necessity for a ligature before opening the peritoneal sac, because, if this precaution be omitted, blood will escape into the abdomen, and may occasion the most serious consequences.'

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

The New-York and Buffalo Fruit Conventions.

From the various articles which have appeared in *The Horticulturist*, and other periodicals, it appears quite evident there is a very erroneous opinion abroad, as to the friendly attitude of these two conventions. From considerable knowledge of both, we believe the assertion may be safely made, that not five persons, having any connexion with either, desire any rivalry, or wish to assume any hostile attitude towards the other.

Both conventions had been proposed some months before their actual session, and both were very interesting and important bodies The writer, who took a much more active part in that at Buffalo, will not from this fact, be accused of partiality when he states that the New-York Convention embraced by far the larger number of eminent pomologists, and for this alone, must by common consent, be regarded as the leading pomological organization in America. It is but justice to those who took an active part in the convention at Buffalo, to state that nearly if not quite all of them so regard the New-York organization. And with this general feeling pervading all parties, we cannot but believe that the approaching convention at Syracuse, will adopt such a course as cannot be construed into an assumption of any hostile bearing.

A single explanation as to the propriety of two distinct conventions—for the east and west, as demanded by the differences of soil, climate and locality. The following facts would indicate that this difference is overrated. Of the *twenty-seven* varieties of the apple, recommended as first-rate by the Ohio Fruit Convention, held last year at Columbus, all except *four* are cultivated in the Eastern States, where even one or two of these four originated. As for the Buffalo Convention (held at the extreme western point of the State,) being peculiarly adapted for the west, it may be stated that the best and most extensive collection of pears, by far, exhibited at that convention, was from Robert Manning, of Salem, Massachusetts; the most extensive collection of plums, by far, was from Charles Hamilton, of Orange Co., N. Y.; and the largest collection of apples was from Charles Downing, of Newburgh, N. Y. We think it will hardly do, yet, for either section to cut loose from the other.

Inquiries.

Sweet Apples.—Will you inform me of the best varieties of *sweet apples*, to ripen in succession to cultivate for stock feeding? *A. Williams, Gaylesburg, Ill.*

For Summer,—Bough and Golden Sweeting.

For Autumn,—Jersey Sweet, Summer Sweet Paradise, Haskell Sweet.

For Winter,—Danvers Sweet, Tallman Sweeting, Sweet Russet of Western N. Y.

Long-Keepers,—Hartford Sweeting, Green Sweeting. The Ladies' Sweeting is a fine and beautiful apple, a most abundant bearer, and a long keeper, but the growth of the tree is too slow to adapt it for stock feeding.

Pear Orchards.—I have just finished planting a pear orchard of over one thousand trees, mostly large seedlings, which I intend to graft in the top; please let me know your opinion about this method—will the trees be as hardy as when grafted at the ground?—I propose putting three to six grafts into each tree, or enough to fill the principal limbs. *H. Avery, Burlington, Iowa.*

Seedling pear trees usually furnish hardier trees than a large portion of the grafted varieties, and hardier trees would probably in most cases be obtained by grafting the seedlings at standard height, as proposed. If the stocks are already of considerable size, the grafts would make a more rapid growth, and sooner come into bearing. But on the other hand, this rapid growth would render them more liable to destruction by the cold of winter, or to death by frost-blight, which should be guarded against by avoiding summer pruning, or any other cause tending to produce a late growth of wood, and by placing them in a deep, moderately dry soil, which shall furnish a uniform supply of moisture through the summer, and favor the thorough ripening of the young wood before winter.

Market Apples.—What are the best five varieties of apples for an extensive orchard for shipping? Is the Tewksbury Blush one of them? *A Western Fruit Raiser.*

Apples for distant market should not only be such as would keep well, but should be of the finest quality, so as to bring the highest price, and thus avoid as much as possible the contingency of the expenses of transportation consuming the profits. Hence the Baldwin and Rhode Island Greening, though so well adapted to New England and New-York, may not do well for the west where their quality more or less deteriorates. The Tewksbury Blush, although an admirable keeper, and very productive, is small, and not quite first-rate in quality. It has been found very profitable in the neighborhood of Philadelphia. Perhaps the following may succeed best for the western states:—Red Canada, or Old Nonesuch, Roxbury Russet, Newtown Pippin, (on strong lime soils,) Northern Spy and Jonathan.

Sending Buds by mail.—How long will buds keep fresh and good, packed in the best manner? *A Williams, Galesburg, Ill.*

The period varies with circumstances, and with the kinds. Well-ripened shoots, of compact or horny growth, as the Gravenstein apple, and Summer Bonchretien pear, if kept moderately moist, will remain in good condition often two or three weeks or even much longer. But early-cut buds, of the peach, cherry, and other spongy kinds, may not keep half that time. As a general rule, buds cut near the close of summer will remain uninjured nearly twice as long as when cut five or six weeks earlier. Cool weather is more favorable than hot. Buds of any sort should not be usually cut, unless sufficiently matured to keep safely for five or six days.

Buds may be sent by mail in a letter, by wrapping them closely in thin oil-silk, so as to enclose perfectly all the moisture; or they may be preserved in larger packages for express, in fine, moderately moist sawdust, but not so large as to favor fermentation, which would spoil them.

Strawberries—Extracts from Correspondence.

The diversity of opinion relative to the merits of different varieties of the strawberry, is doubtless owing to the peculiarities of climate as well as of culture. The results obtained by experienced cultivators in different localities, hence become valuable in enabling us to assign to each variety its true position:—

F. R. Elliott, of Cleveland, Ohio, says "I regard the variety known as the *Willey*[*] as being superior in all respects for general culture. As regards its productiveness, I consider it a variety that will yield, when grown in common soil, and with common every-day, kitchen-garden care, two quarts to one, of any other variety I have tested, except the *Dundee*. In size, it is only medium between Hovey's Seedling and Old Scarlet. Next to this in point of productiveness, (as grown in common garden soil,) I consider the Dundee. Next, *Hovey's Seedling*; and this variety, if given *extra stimulus* in soil and culture, will yield a large product. But such can rarely be looked for, and as it is somewhat tender, not well withstanding winter rigors unless slightly protected, I do not regard it valuable, except where the same stimulus is given it which was given the original plants in Hovey's garden. *Burr's Seedling* [staminate] is a fine fruit, of size between Hovey's and Cincinnati Hudson, of a good flavor, and bears about the same as Ross' Phœnix. *Myatt's Eliza* I regard as the best and highest flavored berry grown, but two years' trial have induced doubts as to its productiveness.[†] In flavor, it has no equal.

A. H. Ernst, of Cincinnati, (President of Cincinnati Horticultural Society, has favored us with the following remarks on some celebrated varieties:—"The *Black Prince*, of which so much has been said, has disappointed us very much; the plants are not hardy enough for our hot summers' sun, and changeable winters. It cannot, therefore, be worth much to us. *Jenny's Seedling* has proved perfectly hardy, a prolific grower, late bloomer, large trusses of medium but uniform sized fruit, with a sharp acid, but fine flavor. The flesh is firm, which is a desirable point for a market fruit. I think it will prove one of the best of the numerous sorts. It is a pistillate, originating at Boston. *Burr's new strawberries*, as with most other new sorts, have been overrated. His *New Pine*, I think, will prove a great disappointment, as it is *hermaphrodite*, that is, having pistils and stamens in the same bloom. It will fruit, but this can never be so large or so numerous as that of a pistillate.[‡]

"*Our Old Hudson still stands unrivalled* for the market gardener. No other sort, with the rude treatment it receives, will produce so much large and fine fruit. This is quite a consideration in a country where the refinements of cultivation have as yet hardly made an entrance."

Thomas S. Pleasants, an eminent practical horticulturist of Petersburgh, Va., says, "This fruit attains to great perfection in this climate, and is of the easiest culture. The most productive varieties are the *Scarlets*, the organs of which are, I believe in all cases, perfect. *Hovey's Seedling* sometimes bears great crops, but not uniformly. *Keene's Seedling* is a shy bearer, but the fruit is enormously large. All productive kinds do well.

Dr. W. D. Brinckle, of Philadelphia, says, "The *Early Scarlet*, *Hudson*, and *Hovey's Seedling*, are the kinds chiefly cultivated here, and are fine varieties. Still finer are the true *Keene's Seedling* and *Ross' Phœnix*, but they are unproductive and too tender for our climate."

Management of Young Apple Orchards.

The following mode of treatment of a young apple orchard, transplanted in the spring of 1848, by which all lived and made a vigorous growth, has been furnished by J. Talcott, of Rome, N Y.—

Last year the ground was planted with potatoes; in the fall, after the crop was off, it had a heavy top-dressing of horse manure, drawn from the village and plowed under. The trees were earthed up to protect them from mice. This spring, the ground was cross-plowed, and it is now sown to carrots, parsnips, onions, and some beans planted among them; the ground has been forked around the trees for a circle of about five feet. They are making a fine growth. The stems have been washed with diluted soft soap.

Horticultural Items.

Tender Shrubs.—D. Thomas, in his Buffalo Address, says, "Some shrubs suffer much from exposure to cold winds. In the open ground, the White Antwerp raspberry has been much injured—while ten rods under the lee of red cedars, it has done well. The common laburnum may illustrate the same doctrine. One which stood in a door-yard, exposed to the west winds, was damaged every winter, until a building was erected very near it, so as completely to shelter it on that side, and from that time, during seven years, it has not been injured."

Shade Trees.—Hill's Monthly Visitor states that two elm trees, two inches in diameter, were transplanted in 1836, and in 1847 were 45 inches in circumference, or 14 inches in diameter. The elm in that region is of very rapid growth. In a less favorable locality, a gentleman has raised elm trees with little care, five inches in diameter in eleven years, from seed. On account of the better and thriftier growth of seedlings raised in the garden, some have found that shade trees could be obtained as soon from seed, as by transplanting from the woods. This is the season for looking out for the seed.

Fruit at the South.—A correspondent of the *Southern Cultivator* (Ga.) says, "There are annual importations of fruit trees of the choicest varieties, from France and England, and from the Northern States. I have planted apples, pears, plums, apricots and almonds from France, and peaches and nectarines from the North; and of the whole, there is not one tree that has borne fruit equal in quality or quantity to our common native kinds." This is, doubtless, generally true—there are, however, a very few exceptions.

The attempt has been made to introduce exotic grapes largely at the South, with the belief that they would be peculiarly suited to the milder climate of that part of the country; but for out-door culture, they succeed even worse than at the North, being eminently liable to the rot and mildew.

European Nurseries.—According to the statements of P. Barry, some of the most eminent European nurserymen, particularly on the continent, have been in the practice of growing trees for sale, for the last half century, without knowing by sight half a dozen of the hundreds in their catalogues. A large and noted establishment, which has sent trees largely to nurserymen in this country, it appears, does not raise a single tree, but purchases at reduced prices from smaller nurseries. No wonder then, that so *large a majority* of the trees sold from most establishments here, should either prove misnomers, or of second or third quality, for without a continual check, by proving the sorts, errors must multiply and continue to multiply to a considerable extent, as they have done.

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[*] And which closely resembles the *Old Hudson* of Cincinnati.

[†] We have found it so unproductive as to be of no value.

[‡] In Western N. Y. it has proved very productive, but needs further trial.

Planting and Building.—It was very just remark of an eminent author, " the works of the person who builds begin immediately to decay; while the works of him who plants commence immediately to improve." Lord Bacon also remarked, " When nations arrive at civility and elegancy, men come to build stately sooner than to garden finely, as if gardening were the greater perfection."

Curious!—A neighboring periodical of high standing, soberly copies a story of grafting the grape, by splitting the shoot and bud in half, from a white grape vine, and joining it to a corresponding half from a black grape vine, which after great difficulty was made to grow, and yielded white and black fruit on the same bunch, and others variegated. Now, the most feeble glance at the laws of vegetable growth, should satisfy any person, that if two buds, cut right through the heart, could, after such formidable mutilation, be made to grow, one whole side of the vine, branches and all, would be the white, and the other side, the black variety, as much so as if two distinct grafts or buds were set, without thus cutting them.

Weeds in Gravel Walks.—An English gardener, has for more than ten years past, kept down the weeds in gravel walks, without any apparent bad effect, by sprinkling over them annually dry salt, in dry weather, and then sweeping it thinly and regularly with a broom.

Horticulture.—R. C. Winthrop, speaking of the achievements of this " fine art of common life," says, " It decorates the dwelling of the humblest laborer with undoubted originals, by the oldest masters, and places within his daily view fruit pieces such as Van Huysen never painted, and landscapes such as Poussin could only copy."

A Profitable Orchard.—The *American Agriculturist* says, " A gentleman within our knowledge has a small orchard on the Hudson river, of less than 7 acres which produces from $500 to $750 worth of apples annually. This is not 1 year of plenty, and another or two of famine, but is a regular, steady, average yield. All this is secured by the simplest process, viz. good management."

Another Orchard made profitable.—An old orchard of four acres had not been plowed for nearly 30 years, and was regarded by the neighbors as worthless. It did not yield more than eight barrels a year. It was well plowed, and thoroughly manured for three successive years, and cultivated with crops. It then produced *two hundred and eighty barrels of apples*.

Curculio.

L. A. Spalding of Lockport, has addressed a letter to our old correspondent, David Thomas, relative to the curculio, from which we take the following paragraphs. It has been long known that this troublesome insect avoided pavements, (*Gen. Farmer*, vol. ii. p. 227,) neither would it venture on a tree that leaned over the water (*Gen. Far.*, vol. ii. p. 219;) but we are satisfied that the extracts will prove interesting to pomologists. Whether this method is cheaper than jarring the trees, and catching the curculio on sheets, may admit of a doubt, for boys soon become very expert at this business.

The idea has occurred to us whether platforms made of light boards to fit closely round each tree, would answer the same purpose. These might be laid down when the trees where in blossom, and removed after the lapse of a month or six weeks. Who will try the experiment?

" I promised to give thee the result of my experiment of paving under *apricot* and *plum trees*, to prevent the attacks of the curculio. For seven years previously I could raise none of the former, and but very few of the latter; but the trees which I protected in this manner, have borne abundantly every year, while those in the same row which are not flagged have borne nothing.

" My trees are ten feet apart in the row, and the rows twenty-four feet apart, running east and west. After manuring a strip under the trees ten feet in width, I covered it with leached ashes two inches thick, and in the ashes I laid flat stones—though brick would do as well—and to prevent the grass and weeds growing, I sowed fine salt over the stones two or three times a year, sufficient to kill the grass; and if by the action of the weather, the joints between the stones became open, I filled them with ashes. I wash my trees once or twice a year with tobacco juice and soft soap, adding a small quantity of salt.

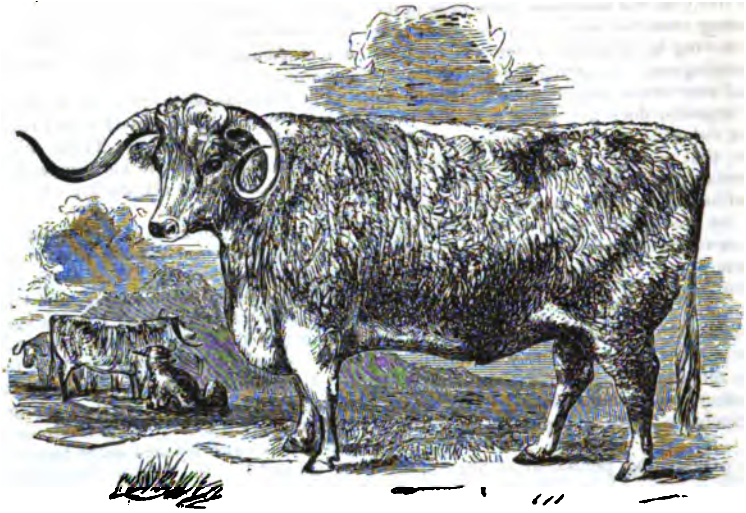
" This year the trees are loaded as usual. Some of the apricots are marked by the curculio, but hardly enough to thin out the fruit as it should be. Such as drop off, are swept up, and given to the hogs. Should any be left, the worm could only find shelter among salt and ashes.

" This plan is cheaper than *jarring the trees*, and much more effectual, unless more perseveringly pursued than I could do."

A Curculio Catcher.

Eds. Cultivator—I send you a description of a curculio catcher different from what I have seen figured or described in any article on the subject, and which I think is a decided improvement on anything used for the purpose. It consists of a square of sheeting or cheap cotton cloth; the size to correspond with the tops of the trees which it is to be used under; one side of the cloth is to be nailed to a straight pole with carpet tacks; the opposite side is also to be nailed to a pole with a division or joint in the middle, and an opening in the cloth to the centre, which is to be occupied by the trunk of the tree. The ends of the poles at the joint are to be fitted with a ferule or socket, into which each end is to be inserted; one end to be fastened permanently, the other so that it can be taken out when the sheet is to be placed around the tree and then put together again, which brings the opening in the sheet together, leaving no space for the insects to drop through. It will be seen that this article is convenient to be handled by two persons, a third person is required to jar the trees. Those who are willing to devote a few hours to this kind of work, may be sure of saving their crop of plums, apricots and cherries, which are often lost from inattention or lack of facilities for catching the *critters* which cause the fruit to fall prematurely from the trees. The stick which is used to jar the trees with should be covered over the end with several thicknesses of cloth, to prevent the branches from being bruised. I. Hildreth. *Big Stream Point, June* 12, 1849.

☞ We learn that a strange and fatal disease has appeared among horses in North Adams, Mass. Several have died. The symptoms are cramp, swelling, and difficulty of swallowing and breathing.



66—LONG-HORNED OX.

Varieties of the Domestic Ox.

The Long-Horns.

The Long-Horns may be fairly considered as one of the original stocks of Britain and Ireland. More than two thousand years ago, when these countries were invaded by the Romans, the Long-Horns were found occupying the low and marshy sections of those islands, while the various middle-horned varieties were in possession of the hills and mountains.

The Long-Horns were much larger than the other aboriginal breeds of Britain* but were generally of coarse bone, thick and mellow hide, with drooping horns of great length,—those of the oxen being from two and a-half to three and a-half feet. The cows were noted for the extreme richness of their milk, which was yielded in moderate quantity. Though the general character of the breed was coarse, the animals had points and qualities which recommended them to favor: they were hardy, excellent for the dairy, and though arriving late to maturity, were very long-lived.

The district of Craven in Yorkshire and Lancashire, were the original strongholds of the long-horns in England. The great improver of the breed was **Bakewell**, who founded what was called the Dishley or new Leicester breed of long-horns, which was for many years the most popular breed in the world. Before Bakewell's day, some spirited attempts at improvement had been made with the breed. Sir **Thomas Gresley** had long-horned stock which was highly prized; and about the year 1720 a blacksmith and small farmer by the name of **Welby** procured some cows of this herd, which were taken to Linton in Derbyshire. Soon after this. Mr. **Webster**, of Canley, procured some of the stock of Sir Thomas Gresley, and procured bulls from Lancashire and Westmoreland, and after several years, distinguished himself as a breeder. He established what was called the Canley breed, from which Mr. Bakewell, about 1760, purchased two long-horned heifers, and by crossing these with two long-horned bulls obtained from Westmoreland, he laid the foundation of his famous breed.

Mr. Bakewell's object was the production of beef at the least expense. Youatt observes—" Many years did not pass before his stock was unrivalled for the roundness of its form and smallness of its bone, and its aptitude to acquire external fat; while they were small consumers of food in proportion to their size; but at the same time, their qualities as milkers were very considerably lessened. The *grazier* could not too highly value the Dishley or new Leicester long-horn, but the *dairyman* and the *little farmer* clung to the old breed as most useful for their purpose."

Mr. Bakewell was ultimately most successful in the accomplishment of his object. He established a breed which for fattening purposes, were superior to any before known; and it is, indeed, doubtful whether, for this purpose they have ever been surpassed. This breed was bred many years by Mr. Bakewell and his associates and successors, and was of great service in crossing the common long-horns, not only in England, but in Ireland. Youatt says—" The Irish breeders owe everything to the new Leicester cattle. A new stock, in fact, has arisen since the improved long-horns were grafted on the native Irish stock."

The stock of Bakewell, and his successors, Fowler, Princep, Munday, and Honeybourne, frequently sold at very high prices. In 1791, bulls sold at auction at £230 to £250, and cows at £150 to £273; and Mr. Fowler refused 500 guineas for ten bull calves.

The long-horns are not as frequently to be met with pure, as formerly; and the variety introduced and cultivated by Bakewell, is thought to be nearly extinct. The pure long-horned stock is, however, still cherished and preserved by some breeders with great care, and excellent animals of this breed are brought out at the English shows.

Importations of long-horns, of Bakewell's variety, were made to this country by several individuals. They were taken to Kentucky by Mr. **Sanders**, as mentioned by him in the March number of our current volume; cows of this stock were introduced into Massachusetts by **Gilbert Stewart** and **Ward N. Boylston**; two bulls of this or some other family of long-horns were imported into Maine by Mr. **Vaughan**, in 1792; and the breed was introduced into New-York, by Mr. **Adcock** of Otsego county. There are probably but few full bloods at the present time in the country. Their success in crossing with the common stock, has been generally satisfactory. They generally improved the form, constitution and muscular energy of our stock, rendering it better for fattening and for labor, while the cows were not inferior for the dairy. The celebrity which the working oxen of some districts of Maine have acquired for their great strength and power, had its foundation in the progeny of the long-horn bulls introduced by Mr. Vaughan. In Kentucky and other western states, it is admitted, that a dash of the long-horn blood is highly useful in giving to the cattle the essential faculty of traveling well. Mr. Sanders, in the article before referred to, mentions the value of the breed in imparting vigor and constitution to the short-horns.

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* The short-horns are not considered aboriginal having been introduced into England from the Continent.

The Poultry Yard.

The Pea Fowl.

This bird, the splendor of whose plumage has been celebrated from the earliest times, is a native of India, where it is still found in a wild state. There are two species; the common, and the Japanese. In size they are about equal; but the plumage of the Japanese species differs considerably from the other, the prevailing colors being green and blue, changing into each other according as they are exposed to the rays of light. There are, however, occasional variations of color in the common species, some being pied, and some entirely white. Mr. COLMAN, in his "Familiar Letters," mentions having seen one of the latter color in the aviary of the Duchess of Richmond. A definite idea of the brilliancy of the peacock's plumage, cannot be given by description, but the bird is generally well known. The feathers which give to the peacock its most striking character, are in popular language called the tail; though they are not the tail, but the tail-coverts. The proper tail is under these, and consists of short, stiff, rust colored feathers, which support the long "gem-starred plumes." The true tail-feathers are eighteen in number; the head is surmounted by a crest of twenty-four upright feathers. The female has the crest but not the other ornamental plumes of the male.

67—THE PEA-FOWL.

The pea-fowl is usually kept merely as an ornament, though its flesh is, in young birds, considered fully equal to that of the turkey. "In ancient times," says Martin —"no great feast in the baron's hall was served up without this bird to grace it—it was presented by the sewer, well cooked, on a large dish, but re-arrayed in its gorgeous plumage; and before the peacock and the ladies did the adventurous knight make his vow."

The pea-hen sometimes breeds the second season, and when she is only a year old, but not generally till two years old. She usually lays from five to ten eggs in a season, and the period of incubation is thirty days. The female should be concealed from the male while she is sitting, because, from a strange propensity, he will often break the eggs, and will sometimes kill the young when they first come out. Even the chicks of turkeys and common fowls are not always safe if allowed to roam in his accustomed walks. The cock does not acquire his full plumage till he is three years old.

The Farmer's Note-Book.

Highways.

The greatest improvement on roads introduced into this quarter, consists in *scraping them lengthwise* as soon as they become settled in spring, or at any other time after wet weather. It is a great labor-saving operation. One day's work with a heavy scraper is generally sufficient to put a whole road district in the finest condition,—filling up the *ruts*, breaking down the *hubs*, and rendering the entire surface as smooth as it ever is in summer.

In years past it was the practice,—and it continues to be so in many districts,—to let the roads alone, for it was found that they would gradually become smooth in dry weather by the battering of hoofs, and the grinding of wheels; and though a long time was required for the purpose, it was supposed to cost nothing; but it did cost the team many a hard strain, and the joints of the wagon or carriage many a hard wrench, before the task was completed. We have now some reason to believe however, that PUBLIC SPIRIT is on the increase among path-masters; and hope that if "two dry sticks will burn a green one," two good examples will not be without their proper influence.

About the middle of the 4th month, I observed that the road from Aurora to Poplar Ridge, had been rendered beautifully smooth; and on my way to Auburn, similar improvements cheered me through most of the distance, though more scantily as I approached that city, ceasing entirely a little before I entered its limits. In this, I was disappointed, for cities ought to be the head-quarters of Public Spirit.

There is another labor-saving operation which some worthy citizen in the olden time had caused to be incorporated with our Road Laws, viz: *To throw the loose stones out of the beaten track once a month.* This excellent provision, however, has long since been a dead letter. To the traveler who goes forth in his own conveyance, such neglect must be comfortless, especially if he has eyes to observe and faculties to think; and this will be increased where soft mud, or rich soil has been scraped in, inevitably to make mortar in a climate like ours. But our whole system of road laws, needs revision; and the office of overseer of highways ought to be utterly abolished. VIATOR.

Besides the defects in the management of roads mentioned by our esteemed correspondent, there are some others which we think ought to be remedied. In a late excursion, we had occasion to feel the want of *guide-boards*, in many instances. Not unfrequently, where the roads diverged, there was nothing to direct the traveler to his destined point, and he could only learn which way to go, by inquiring at the nearest house, sometimes half a mile out of his direct route. We had supposed there were laws in most parts of our country, requiring the erection and support of suitable guide-boards. If there are not such laws, they are certainly *needed* in some communities; and if such laws exist, they should be enforced. Another great defect is, leaving roads rough and uneven, after they have been, as is in some cases falsely called, *repaired*. Loads of earth unspread, and large lumps of hard clay, are left on the traveled part of the road, where there is no way of avoiding them, rendering carriages liable to be broken, with all the care that can be used in driving. The hollows hold water, which softens the earth and the wheels work out the mud, leaving deep holes. Why not finish the road as far as begun,—or rather begin no more than can be finished,—leaving the rest without making it worse than it was before? Another defect,—which, however, we noticed in but few instances,—was plowing the sides and ridging the centre of roads on the tops *of hills and sharp knolls*. How much easier to have *improved* the road by scraping the tops of the knolls into the hollows! Eds.

Farm Improvements.

The improvement of the soil is one great object to be attained by the good farmer. All the fertilising substances within his reach will be devoted to this purpose, in order to increase the present quantity of his crops, and to insure a greater fertility of soil for the future. Annually removing the productions of the soil proves exhausting, and in time would render the soil barren, but science teaches us, that all the substances that make a soil fertile, can be restored, and its original richness be retained. It is then the duty of all that cultivate the earth, so to direct their labors that all the fertilising elements which they take from the earth, shall be returned to it again, that the soil be neither "barren nor unfruitful." That there are many who take an opposite course is not to be denied. The precept "keep what you have and get what you can," is as effectually obeyed in directing the labors of their farms, as in their traffic with their fellow men. And yet even such men will acknowledge the importance of improving the soil.

But though the improvement of the soil is reckoned of the first importance, the improvement of the farm in other respects, should certainly not be neglected. The judicious and enterprising farmer will see where improvements *should* be made, and he will see that they *are* made. It is not supposed that farmers as a class, have the means to make radical alterations in their buildings, or in the plan of their farms. They need not. A few hours' labor here, or a few dollars expended there, may make a greater improvement proportionally, than hundreds of dollars laid out in alterations. Look at those bars, which have to be let down or taken away, on an average, once or twice a day throughout the year, for the purpose of passing through. Just put a gate there, which can be done at a trifling expense, and there is an improvement from which benefit will be derived every day. A gate not only facilitates passing in and out, but it looks better. Their superiority needs no demonstration,—it is a "fixed fact." And yet there are thousands of farms scattered all over the land, that are entirely without any such *labor-saving* articles, and farmers are living as contentedly as if they could not be obtained.

Again; how often are we reminded of the observation of Solomon, "I went by the field of the slothful, and lo, it was all grown over with thorns, and nettles covered the face thereof, and the stone wall thereof was broken down," when a few hours' work would destroy the "thorns," eradicate the "nettles," and repair the "stone wall," while the satisfaction of contemplating the improvement, would amply compensate for the labor bestowed. I know the women and children are eloquent pleaders in behalf of the raspberry and blackberry bushes, but they had better be cultivated in the garden, than monopolize the corners and sides of fields appropriated to grass and grain.

Again; another method of improvment is by building substantial fences. These will differ in different localities according to the kind and cheapness of material. In New England, and especially in the Granite State, the majority of farms have the material for stone wall scattered all over their surface. This can be made available by digging and occasionally blasting, and when once laid into wall will last forever. This method, by removing the stones from the field, and by making a durable fence, has a double advantage. In building wall where the ground is soft, and indeed in all cases, it is better to dig a trench, say about eighteen inches wide, down to the subsoil, and fill nearly full with small stones, on which to lay the foundation; then the wall will not be thrown out of place by frost, nor settle into the ground. Stone wall is certainly expensive in comparison with some other fences, but its durability and security renders it cheaper in the end.

These are some of the methods in which farms may be improved. But the farmer, who in his system combines beauty with utility, will need no suggestions in regard to the improvement of his farm. When his crops do not reqnire his attention, he will find something to do, either in beautifying or benefiting his premises. Many acknowledge the necessity of improvements, but they never begin to make them. Bushes grow around their fields and meadows, rocks and stones encumber their tillage lands, their fences grow every year more unsightly, and their fruit trees remain unpruned and ungrafted; but they plead they "don't have time to remedy the evils."

> "They know the right and they approve it too,
> They know the wrong, but still the wrong pursue."

W. L. Eaton. *East Weare.*

Imported Cattle.

Eds. Cultivator—On my return from England last spring I brought with me, for account of Col. Sherwood, of Auburn, New-York, and myself, a short horn bull and three short horn heifers; and one short horn bull calf for J. F. Sheafe, Esq., of Dutches Co., N. Y.—Col. Sherwood and myself have had so many inquiries as to these cattle, that I ask a notice of them through your columns.

The bull is 3d Duke of Cambridge; his portrait and pedigree may be seen in the 4th vol. of the English Herd Book, page ——, No. (5941). He was bred by that distinguished breeder, Thomas Bates, Esq., of Kirkleavington, Yarm, England, who is so widely and well known both in England and America.

The heifers and bull calf were bred by John Stephenson, Esq., of the county of Durham, England, well known as the possessor of the superior and famous Princess Tribe of short horns.

In the execution of the commissions of Mr. Sheafe and Col. Sherwood, I was left to my own discretion; they trusting to my judgment. I made a thorough examination of the various herds of short horns in England, and from among them selected such animals as I thought would meet the views of my associates, and at the same time satisfy the critical scrutiny of American breeders.

These cattle have now been in America five months, and have been seen by hundreds of persons, including many of our best judges and breeders. It gives me great pleasure to say they have met the approbation of all who have seen them. The universal testimony is that in every respect they are the best short horns ever imported into America.

The vessel on which they were imported, encountered weather of extraordinary severity, and the voyage was both long and tempestuous; indeed for twenty days there was a continued hurricane. In consequence of this, the cattle were reduced and worn out. They are now all recovering, except one heifer; she was ill and was knocked all to pieces, and has not yet regained her form, and I fear may not. She was the best of the three heifers before sailing.

The origin of these animals is this. The late Sir Henry Vane Tempest, of Wynyard Park, county of Durham, England, possessed a herd of short horns widely known for its wonderful and unsurpassed excellence. They are designated in England the "WYNYARD HERD" or PRINCESS TRIBE. In 1800 Sir Henry purchased the original of his herd, the cow Princess, of Robert Colling. After the death of Sir Henry, the Wynyard herd was sold, and the cow Angelina (a grandaughter of Princess) became the property of Mr. Stephenson, of Wolviston, county of Durham. From Angelina the animals which I brought over are descended. I give the pedigree of one of the heifers in full, to show how rich is their breeding.

Princess 3d, got by Napier, (No. 6238 in the English Herd Book) dam Rose Ann, by Bellerophon, (No. 3119) grandam Rosette by Belvidere, (1706); great grandam Red Rose, by Waterloo, (2816); great great grandam Moss Rose by Baron, (58); gr. gr. gr. grandam Angelina (bred by Sir Henry Vane Tempest) by Phenomenon, (291); gr. gr. gr. gr. grandam Anna Boleyn, by Favorite (252); gr. gr. gr. gr. gr. grandam Princess, (bred by Robert Colling) by Favorite, (252); gr. gr. gr. gr. gr. gr. grandam Brighteyes by Favorite, (252); gr. gr. gr. gr. gr. gr. gr. grandam Brighteyes, (bred by Alexander Hall, and by him sold to Robert Colling) by Hubback, (319); gr. gr. gr. gr. gr. gr. gr. gr. grandam Brighteyes by Snowdon's bull, (612); gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam by Masterman's bull, (422); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam by Harrison's bull, (669); gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. gr. grandam Tripes, (bred by Mr. Pickering of Sedgefield and by him sold to Mr. Hall) by the Studley bull, (627).

The pedigree of the Princess Tribe of short horns traces farther back than any one recorded in the Herd Book, and the *blood throughout* is of the *highest* character.

In the above pedigree the bulls Napier, Bellerophon, Belvidere and Waterloo, were all bred by Mr. Stephenson, and are all descended from Angelina. Baron is also of the same tribe, though not bred by Mr. Stephenson.

The bull 3d Duke of Cambridge was got by Duke of Northumberland (1940), dam Waterloo 2d; by Belvidere, grandam Waterloo 1st by Waterloo (2816), great grandam Lady Antrim, by Waterloo—Anna, by Launsleeves, (365)—Angelina by Phenomenon, (491), &c.

Duke of Northumberland, bred by Mr. Bates, was got by Belvidere, (1706); dam Duchess 34th, by Belvidere, (1706); grandam Duchess 29th, by second Hubback, (1423).

Mr. Bates bought Belvidere of Mr. Stephenson.

The other two heifers are bred as follows:

Princess 2d got by General Sale, (8099); dam Duchess by 4th Duke of Northumberland, (—); grandam Rosette by Belvidere, (1706), &c., as in pedigree of Princess 3d. Fourth Duke of Northumberland was brother of Duke of Northumberland.

Red Rose 3d, got by General Sale, (8099); Jane, Maid of Orleans by Marmaluke, (2238); grandam Helena by Waterloo, (2816); great grandam Moss Rose by Baron, (58), &c., as in pedigree of Princess 3d.

General Sale was got by Napier, and is a full brother of Princess 3d.

There are portraits of Napier and Princess 2d, at the rooms of the N. Y. State Agricultural Society, Albany. *Such* portraits of *such* animals are no where else to be seen in this country. I invite an inspection of them.

I have great pleasure in knowing that I have brought to this country so superior a bull from the herd of that eminent breeder, Mr. Bates. He is the only bull in America got by Mr. Bates' *crack prize* bull Duke of Northumberland, the best Mr. Bates ever bred; and Mr. Bates has but one more got by the same bull, now left; and Duke of Northumberland is dead. Persons desiring the blood of Mr. Bates' herd, can no where else in this country procure it *with such high characteristics of style, quality, symmetry* and *substance.* Mr. Bates repeatedly told me that 3d. Duke of Cambridge was more like his sire than any other bull ever got by him.

From the various expressions of approval received, I select the following. The writer, Lewis F. Allen, is well known as an extensive breeder of short horns, and as a judge. No person in the United States has had a more intimate knowledge of the short horns in our country for the last twenty-five years; he is the author of the American Herd Book. * * * "Since I saw him I have thought much on your bull 3d. Duke of Cambridge, and in comparing him in my mind with *all* the bulls I have ever seen, I am more and more impressed with his superior value to anything *yet* brought into the United States. In short he fills my mind *entirely* with *all* the qualities which a *perfect* short horn should possess; and I don't know but the heifers are *quite* his equals in style, quality, &c. I trust you will have all the success, both in increase and in the sale of their produce which you deserve; for our country has *never* before, within my knowledge, received such an acquisition in the stock line as in these cattle. You deserve much for your enterprise, and Mr. Stevens a great deal for his judgment and good taste in selecting such animals. They far exceed my anticipations, although, I am free to say, I anticipated much from Stevens's selections, with all England for a field to choose in."

This opinion was unsolicited on the part of Col. Sherwood or myself, and wholly voluntary on the part of Mr. Allen.

Steps have been taken to have a portrait of 3d. Duke of Cambridge engraved for publication in *The Cultivator* for September or October; and of Princess 2d. in some future number.

These animals are now at Col. Sherwood's, Auburn, New-York, where they may be seen. It is now designed to show them at Syracuse, at the great cattle show of the State Society in September. Col. Sherwood and myself invite the attention of breeders and amateurs to them. AMBROSE STEVENS. *New-York.*

Litigation.

EDS. CULTIVATOR—Whoever shall write a fair history of our State, must set it down as one of the evils of the time, that we are a litigious people, too fond of law suits; and that we support and sustain too many lawyers.

The farmers being a majority; and their property being mainly in lands that can be readily reached by the taxing officers, pay a larger share of the expenses of government in proportion to their means, than those engaged in other pursuits. If they are in debt for their lands, still they are taxed for them, without any allowance for their indebtedness. This might and ought to be remedied by an amendment of the assessment and taxing laws. Still, this would not reach the evil of a too expensive judiciary system. This must be done, if at all, by lessening the amount of litigation. Let the cause be removed, and the effect will cease, as a matter of course. It seems to me that public opinion needs a change on this subject; and if effected, it must commence by individual exertion. Let each farmer use his influence to effect a reform, and they will succeed. In many of the causes tried at our county courts, the costs exceed the damages; and the parties are the worse off, both in a moral and pecuniary point of view. Jurors and witnesses are called from their business, and the people taxed to pay judges, jurors, &c. Suits are frequently determined by some technicality of the law, and not by strict justice. The parties often resort to intrigue and management to gain their suit, which they would not otherwise do. But few men if any, who are frequently engaged in lawsuits, sustain a good moral character. A civil suit, commenced in the first instance, in a justices' court, for a trifling amount, often gets a whole neighborhood by the ears; and is the cause of divers slander suits, indictments for assault and battery, perjury, &c. Thus they are harrassed by being called to the county seats as witnesses; many of them take sides with one or the other of the parties. Bitter and unkind feelings are engendered, and a looseness of moral principle, prejudicial to good morals, and good society is the natural consequence.

If, in traveling, you pass a huddle of houses in a dilapidated condition, and where almost everything in the vicinity bears marks of sloth and negligence, you may set it down as morally certain, that justices' courts are frequent, and the people are given to litigation; and that the only persons, if any, who make money, are the rumseller, the pettifogger, justice and constable.

How then are these evils, (and all must admit them as such,) to be remedied? Let every farmer make up his mind not to have a lawsuit, *unless it is absolutely necessary*. Let him as a general thing, sell his produce for ready pay; pay down for what he buys, deal honorably and uprightly, adopt the rule of "doing as he would wish to be done by," and he will seldom be in a situation in which a suit will be necessary. We can find many farmers, sixty or seventy years of age, who never had a suit in their lives, and the writer of this is one of the number.

Let the most influential farmers take this course, and advise all others to do the same. Let all those who are fond of lawsuits and quarrels, know that they lose character and standing by them; and it is believed that agricultural districts would be much improved, both in a moral, pecuniary and social point of view. The farmers are from their peaceful and retired situation; from their independence and occupation, exactly in a right situation to commence and carry out a reform of this nature, and would themselves be the greatest gainers by it.

When I see a young farmer fond of attending lawsuits; often taking sides with one or the other of the parties, frequently a witness; studying the nice technicalities of the law, and trying to get elected a justice or constable, I cannot but think he had better be learning and practicing the art of good farming; and spending his leisure time, reading some good works on agriculture, moral philosophy, and political economy. FARMER.

Yield of Crops in Ohio.

We have compiled the following table from the returns of the several counties in the state of Ohio, published in the Report of the State Board of Agriculture. They purport to give the average yield per acre, for 1848. Wheat is generally stated to have been considerably above an average—other crops about an average, compared with other seasons. Potatoes are said to have been injured by the "disease" in most instances, and in several counties, where the yield is not given it is mentioned as a failure—not more than five to twenty bushels of sound tubers per acre having been obtained. Some other crops are noticed in the returns—such as buckwheat, and, in a few instances, tobacco. The yield of the former ranges from twelve to thirty-seven bushels per acre; and that of the latter from 600 to 2000 pounds per acre.

COUNTIES.	HAY. Tons.	POTATOES. Bushels.	WHEAT. Bushels.	RYE. Bush	BARLEY. Bushels.	OATS. Bushels.	IND. CORN. Bushels.
Adams,			12	....	....	106	30
Athens,	1½	100	15	....	....	25	40
Ashtabula,	1½	150	15	....	....	40	45
Ashland,	1½	40	10	15	15	30	50
Champaigne,		75	16	....	....	30	45
Carroll,	2½	50	15	20	35	28	45
Clinton,	1½	40	20	....	....	35	45
Columbiana,	2	....	17	....	25	50	25
Clark,	1½	100	18	15	....	40	40
Cuyahoga,	1½	....	10	12	....	40	35
Crawford,	2	....	20	....	35	33	40
Clermont,	1	50	13	10	12	12	45
Coshocton,	....	....	12	....	....	25	40
Erie,	2	25	15	....	22	35	35
Franklin,	2	75	18	25	20	40	50
Delaware,	2	....	18	....	20	30	45
Darke,	2	70	20	25	20	35	50
Defiance,	2	150	20	25	20	45	45
Fayette,	1½	30	12	12	....	25	35
Greene,	1½	100	17	20	40†	30	60
Gallia,	1½	50	12	....	....	20	25
Granger;*	1½	....	10	10	12	40	35
Guernsey,	1½	60	14	....	25	40	40
Highland,	....	....	12	12	12	15	50
Henry,	1½	50	18	....	....	45	45
Hocking,	2	100	12	....	....	25	35
Hardin,	2	....	17½	14	30	33	35
Hamilton, (averages not given)							
Hancock,	2	50	20	25	....	40	40
Huron, (averages not given.)							
Harrison,	1½	....	15	....	....	35	40
Jefferson,	1½	....	15	15	40	25	40
Lake,	2	50	12	15	35	50	45
Licking,	2	100	18	15	25	30	50
Lawrence,	1	50	10	....	....	20	30
Lorain,	1½	50	13	....	....	40	30
Mahoning,	1½	40	6	....	30	40	40
Medina,	1½	....	10	....	30	40	35
Monroe,	1½	....	12	....	....	25	25
Meigs,	1½	60	15	15	20	35	40
Muskingum,	....	....	16½	....	....	40	45
Miami,	1½	....	25	....	....	35	65
Montgomery,	1½	100	18	15	25	30	45
Morgan,	1½	....	20	....	....	30	35
Mercer,	2	100	15	10	18	20	25
Madison,	1½	50	15	20	20	30	40
Ottawa,	1½	....	17	....	...	30	25
Paulding,	2	100	20	....	....	40	50
Putnam,	3	150	13	25	....	25	50
Preble,*	1	50	16	....	....	15	20
Portage,	1½	50	9	8	20	35	40
Perry,	1	....	20	18	....	50	40
Pickaway,	1½	....	15	14	....	20	40
Richland,	2	....	16	15	....	40	35
Ross,	1½	....	13	....	....	22	45
Seneca,	1	....	15	....	15	40	40
Summit,	1½	....	9	10	15	35	40
Shelby,	2	....	22	15	40	40	25
Stark,	2	50	15	20	30	....	50
Trumbull,	1½	60	10	17	20	30	40
Tuscarawas,	2	80	17	16	23	30	40
Union.	1½	80	15	....	....	35	35
Van Wert,	1½	150	20	20	....	30	33
Washington,	1½	100	10	15	....	25	45
Warren,	1½	100	15	12	8	25	50
Wayne,	2	....	18	20	....	45	35
Wood.	1½	20	10	18	18	34	34
Wyandot,	2	30	15	....	....	35	42

* In this instance the yield is put down at 40 bushels per acre for "fall barley," and 20 for "spring barley."

† All the crops in this county, except wheat, greatly injured by drouth.

Agricultural Reading.

Agricultural pursuits, I deem second in importance to none other. It has ever been my delight to see a spirit of improvement enlisting the minds of many of our most successful farmers, and by observing some of their most skillful management, it has been a source of pleasure to glean ideas and profit by them, whenever the opportunity offered. I shall ever feel that I owe a debt of gratitude to the founder of the first agricultural paper that I became familiarly acquainted with—*The Cultivator*. It enlisted a spirit of observation and improvement—a spirit of *go-aheadativeness*,—to advance beyond where our fore-fathers stopped. *The Cultivator* at its commencement, had a high and aspiring motto—" To Improve the Soil and the Mind "—and I believe it has faithfully adhered to this principle up to the present time.

The agricultural community generally, is not divided (in respect to their employment) into sects and parties; but is engaged in common, in raising the products of the soil. I hope to see such a spirit of liberality that each one will feel free to exert their energies to ameliorate and improve the condition of mankind generally. At the present day, the odium is somewhat dispelled that used to deter many from engaging in agriculture; it engages the attention of some of the first men of the age; and is acknowledged to be not only an honorable, but a profitable occupation. RUSTICUS. *Quaker Springs, N. Y., June* 12, 1849.

Agriculture of California.

EDS. CULTIVATOR—The following extracts are from a letter received by me from my brother-in-law, Joseph Aram, who removed to California with his family, in 1846. The portion of the letter which relates to the agricultural resources of that country, I thought might not be uninteresting to many of the readers of *The Cultivator*. The letter is dated Pueblo de San Jose, Upper California, *March* 9, 1849. DANIEL H. WRIGHT. *Castile, Wyoming county, N. Y.*

" Can crops be raised in California without irrigation ?"

Wheat, barley, corn, and oats need no irrigation, they do well on the prairies; but vegetables need water, though on low damp ground, they do well.

" What do grains yield per acre ?"

Wheat from 25 to 75 bushels per acro; barley the same, corn from 15 to 20 bushels; oats grow spontaneously over a great portion of the country;—I have frequently seen those that would yield from 60 to 70 bushels per acre. All kinds of grain are scarce and dear.

Plowing for wheat commences in December, and we sow from that time till the first of March. Farming has been neglected on account of the mines. Wheat is worth $2 a bushel, corn $3.50, barley $5.00, potatoes $4.50, butter per pound, $1, eggs per dozen $1, horses each, $50 to $200, mules $100 to $300, American oxen, a yoke, $200, California oxen, $100, beef cattle, each, $8 to $12, wagons $200 to $1000. The scarcity makes the price. There is nothing cheap but beef cattle.

Lumber is worth $75 per thousand feet, very scarce at that; it has sold for more. Nails 10 cents per lb., by the keg.

Monterey has about 5,000 inhabitants, Puebla, 2,000, San Francisco, 5,000.

Forty-six vessels came into the port of Monterey, and eighty-four into San Francisco, during the past year, but no whalers,—they are afraid to come in, for their hands would run away to the mines. The extent of the bay of Monterey is considerable—it is 15 miles across its mouth;—the harbor is a narrow neck running into the main land; it is properly an arm of the sea. San Francisco has taken the lead the past year, being better situated for the mines.

The Spaniards depend on selling horses and cattle for their subsistence. The Americans get their living by *skinning* the Spaniards, and many have grown rich at that. The latter are very indolent, and much given to gambling.

We have a variety of fruit,—pears, the best that I ever saw; apples rather poor quality—need grafting; peaches, very good; quinces, most excellent; grapes are good; apricots, nectarines and figs, but not good.

The changes of the seasons are as follows: The rains commence about the first of December, and we have occasional showers from that time until the month of March; the balance of the year has no rain. But vegetation does not suffer as much as you might imagine; the soil seems adapted to the climate.

The Spaniards build altogether with *dobies* or unburnt bricks; most of the Americans build frame houses. But those dobies make a most excellent house.

Grain is always threshed immediately after it is cut—trod out by horses.

There is some very good water, and considerable very bad—the springs are good, but many of the wells are poor.

Bilious diseases are the most common.

The face of the country is mountainous with valleys between. For agricultural purposes, the valleys are generally good, the hills and mountains are only valuable for grazing.

The people transport their produce in carts drawn by oxen, from the interior to the towns on the coast.

" What is land worth?"

The price of land is rising fast. I have a piece of land containing between three and four hundred acres, for which I paid, two years since, $200, now it would bring $4,000. Lots in Monterey are worth from $100 to $2,000, without buildings.

Wagon timber is scarce near the coast, but in the vicinity of the mines, there is an abundance.

We have plenty of saw mills, but they are standing idle, those that tended them having gone to the mines.

The forest trees are, oak, pine, red-wood, madrone, cedar, live-oak, white and red fir. The timber is confined to the hills;—the plains are generally open. I have seen abundance of red-wood timber three hundred feet high, and from 12 to 15 feet in diameter at the base.

The streams overflow in June and July, when the snow melts on the high mountains. The rains during winter raise the streams, but not to overflow.

It is about 200 miles from the coast to where the gold is found; the gold mines run north and south, parallel with the coast.

We have plenty of fish, but few fishermen. Also, deer, elk, antelope, grizly bear, and wild horses and cattle. But no one stops to hunt now—except the Spaniards, who go out now and then to catch wild horses, which are becoming so valuable that it is quite an object to catch them. Cattle and hogs are as fine here as I ever saw. Our Spanish cows cannot be beat by your Durhams, only they will kick.

This would be a fine country for bees, if they could be got here; but it is somewhat singular, there are none to be found.

Weather in Virginia.

EDS. CULTIVATOR.—I see in the Cultivator for June, 1849, page 178, a piece headed the weather, and as I keep a sort of diary, I concluded to send you an account of the weather with dates. I live thirty miles west of Norfolk. Nov. 3, '48, frost and ice; 5, rain; 6, fair and cold; 8, frost, cold and fair; 9, ice; 12, rain; 16, fair and pleasant; 18, rain and very chilly; 19, snowed; 20, ice; 21, ice; 25, warm; 20, frost and ice. Dec. 2, rain; 12 to 16, rain; 19, very warm; 28 to 31, ice. Jan. 1, cold; 3, freezing of nights to 7; 9, snowed; 11, very cold; 21, rain; 24, cold and fair. Feby. 1, rain; 6, fair and very cold; 8, freezing; 13, fair and cold; 15, snowed six inches deep; 18, snowed; 22, snowed; 24, fair and pleasant; 26, storm, wind and rain; 28, storm continues. March 1, rain and very chilly; 11, delightful; 20, cloudy; 31, fair and pleasant. April 1, cloudy and chilly; 5, clouds and sun; 10, fair and warm; 12, fair and windy; 14, fair, cold and blustery; 15, ice ¼ inch thick and very cold; 16, ice; 17, fair and cold—

and this cold spell killed all the young vegetables in the gardens, (pease cut down, &c.,) and all stone fruits of every sort—19, fair and extremely cold; 20, fair, and not so cold—to the end of the month much more moderate. May came in quite pleasant, &c. &c. J. Bunch. *Chuckatuck, June*, 20, 1849.

The Cost of Fine Wool.

Eds. Cultivator.—It is impossible to give your correspondents, who inquire the cost of a pound of fine wool, a definite answer. The best answer may be found in a statement of facts and estimates by those, in different parts of the land, who have experience in the wool business. Like Polydamas, I was pleased with the exact statistics and sensible estimates of Mr. Pettibone. To the same end I send you a few statements, in regard to the business here. And what I say shall answer for about half a dozen farms in this immediate neighborhood, which is in a valley called the Oblong, quite in the eastern part of Dutchess county. We follow a mixed husbandry, as the soil is about equally adapted to grain and grass, and yields a better return than by any single branch of farming. The value of improved lands, in good sized farms, is about fifty dollars per acre. The number of sheep kept on a farm of two hundred acres is four hundred, besides a team of four oxen, two or three horses, four cows, and a few young cattle. There are usually about forty acres under the plow, and one hundred and sixty in meadow and pasture. What proportion of the farm is devoted to the sheep cannot be defined, probably not less than 120 acres. The quantity of wool produced on an average of these flocks is two pounds and three-quarters per fleece; and the average price per pound, for the last six years, has been forty-seven cents. The surplus sheep sold each year from a flock of 400 are not less than 100, at the price of a dollar and a quarter per head. This amounts to six hundred and forty-two dollars.

The cost of keeping sheep includes a part of the general expenses of the farm, besides the interest on the price of the land, as fencing, taxes, seed, plaster, manure, &c. Henry Swift, of Poughkeepsie, was accustomed to pay to a tenant on one of these farms, some years ago, two hundred dollars a year, for the labor given to four hundred sheep, which included the securing of the hay, winter care, washing and shearing, and all other labor devoted to them.

Now, as to the profits of the business of growing fine wool, it is plain that it does not yield a large per cent, though like other branches of farming, when *well done*, it brings a fair return. We quite agree with Mr. Pettibone, that it makes all the difference in the world, whether a thing is done right. There is a general impression among our farmers, that their business does not yield them five per cent. on the capital invested; but I believe it can be demonstrated, that with skilful and prudent management, the farm yields at least six per cent., if the valuation of the land be not too extravagant.

On good land, easily cultivated, the raising of grain is twice as profitable as any branch of grazing. But as there must be manure, to keep up the fertility of the soil, it is necessary that a portion of the farm be devoted to stock. Therefore what seems to be a deficiency in the profits of the grass crop, is made up in the increased production of grain, and thus in a mixed husbandry, the acre of grass is truly as profitable as an acre of wheat.

We prefer fine wooled sheep to other stock, for several reasons; and the first is that on our dry arable lands it is more profitable than making beef, and brings much less care and labor than the dairy. We estimate that it requires as much hay and pasture for eight cows or steers, as for one hundred sheep. Sheep will do as well on straw and other coarse feed, as any stock will, and on poor or dry pasture sheep will do well, while cows or fatting cattle would not do at all. The quantity of hay to one hundred sheep through the winter does not exceed fifteen tons. It is our opinion also that on land suitable for wheat and corn, the manure of sheep is better than the manure of cattle, and on certain cold grass lands as a top dressing. I might add that there is less fluctuation in the wool market, than in that of beef and the products of the dairy, constituting a more stable and uniform business. And there is less trouble of buying and selling, after the flock is once established.

Some good farmers enjoy a greater profit than that I have stated, but many, for want of proper care, miss not only the profits, but also all the pleasures of their profession. I ought to add, that in some of the middle towns of Dutchess, on their fine grazing lands, they have given up fine wooled sheep for cattle; but we still think that this business, in connection with the whole system of farming, should not be hastily exchanged for any other. Newton Reed. *Amenia Union, July*, 1849.

Wire Fences.

Eds. Cultivator—A writer who signs himself S. W., in your July number, desires information on the subject of making wire fences. I will give what information I am able, and from my own experience. I have made, during the spring of 1848, about 1000 feet of wire fence on my premises; about 700 feet of which I put up in the following manner:

The posts were of white oak and butternut, and as it was undertaken mainly as an experiment, and as I intended eventually to plant some kind of hedge on the line, I paid but little regard either to size or beauty of the posts. They were set ten feet apart, and in depth about two feet, excepting at each end, one of larger size was set about four feet deep, imbeded firmly in stones, with a brace to each post, running from the top to near the bottom of the next. Four holes in each post were bored with a brace and bit from eight to nine inches apart. Wire of No. 9, was run through the whole length, and fastened at one end; and I adopted the following simple and easy method of straining them at the other end. I took a wrench which I use for turning the nuts on may wagon axles, and fitted it on one end of a stick of hard wood one or two feet long—the remainder of the stick being nearly round, and one or one and a half inch in diameter. Through that end of the stick, a hole was bored to admit the wire after it had passed through the end post. I then turned the stick with the wrench, until the wire obtained a sufficient tension—and, by the way, a great power can be obtained by such a purchase. The stick was then nailed to the post, and sawed off, and the same process performed with the remaining wires until all of the stick which was necessary was used up.

Another fence near my house was built with rather more regard to fancy. The posts were small, of uniform size and set nearer together, and the wires run through, forming lattice or diamond work, by passing alternately from the first to the second hole, and so on down. In this fence seven wires of smaller size, (No. 11) were used, with the addition of a board at the base. Upon all of the wire I put a thick composition of tar, oil and lead, which has proved an effectual protection from rust.

I can now say that these fences have proved good, beyond my expectations. I can say to your inquiring correspondent, that I did not loosen the wires, and the posts were not affected in the least by the severe frost of last winter. The cost of the wire for the fence first mentioned, was less than thirty cents per rod, and as to the value of the posts, the account can easily be adjusted with the *wood pile*. Should S. W. obtain no other reply to his questions, I would also state that in my opinion, posts at the distance of twenty feet apart would make a sufficient fence for sheep, provided a wire of small size were placed midway between the posts, and twisted around each horizontal one from top to bottom. This would answer nearly as well as an additional post. It is desirable to coat the wire with the composition I have mentioned or with coal tar, as it is liable to rust, particularly if it passes throught chesnut posts, as that kind of timber, although durable, contains an acid extremely corroding. The holes should be half an inch, at least, in diameter, so as to admit a small brush. In case a post should decay, the wires can easily be sawed out, and new ones replaced. Staples No. 7 or 9, would probably answer well instead of holes through the posts. The whole fence can be painted any color desired.—Where trees have been set out on a line, wire can be attached with obvious ease and advantage. In the valley of the Connecticut, where I reside, several of our farmers have, within a few months, built wire fences in their meadows, which are annually overflowed by the river, and which will doubtless answer every good purpose intended. The great increase of rail roads, of manufacturing establishments, and the making of bricks, have materially raised the price of wood and timber in this State; consequently, fencing is quite an item in the expense of a farm. It is my opinion, that in a few years wire will be a common, if not the chief material for fences, at least in this vicinity. R. H. Phelps. *Windsor, Ct., July* 16, 1849.

The $100 Premium on Sheep.

A purse of $100 having been offered for the best 25 Merino ewes and the best 25 Merino lambs, under one year old, to be exhibited at the next fair of the New-York State Agricultural Society, I propose to be a competitor in that exhibition, against any and all flocks that may be brought out. I state this, not as a challenge, but simply as a proposition, which may call together my brother farmers from different parts of the country. My object is to convince myself where the best Merino sheep are. If I have not obtained them, I must get them; for I am resolved to improve from the best, whatever may be the cost. By a fair competition we may compare the best specimens from the best flocks, and by that means may learn where the best sheep are to be found. For a series of years, I have spared no pains or expense to possess myself of the best Merino sheep that could be found, either in this country or the old world. It remains to be seen whether these efforts have been successful; and to this end I earnestly invite the growers of Merino wool throughout the Union, to meet me on the show-grounds at Syracuse next September, in honorable competition, and thus add another interesting feature to the somewhat national exhibition which will be made at the New-York State Fair. A. L. Bingham. *Cornwall, Vt., July* 16, 1849.

What constitutes a Thorough-bred Horse?

In the first place, it may be observed, that there has been a great deal of discussion in various publications, on sporting, but to very little purpose, on the much agitated question, "What constitutes a full blood, or what is termed a thorough-bred horse?" The question is very easily decided; the term "thorough-bred horse," merely implying one that can be traced through the Stud-Book, by sire and dam, to any Eastern stallion, or to what were called the Royal Mares, imported by Charles the Second, as they, together with two or three of the first imported stallions formed the *ne plus ultra* of all racing pedigrees. As to the assertion, that, for a horse to claim the title of thorough-bred, it is necessary that he should be of pure Oriental descent, it cannot for a moment be supported; as, independently of the fact that only two mares are stated in the Stud Book, or elsewhere, on authority, to have been imported into England in the early days of racing, it is well known that the first British race-horses were those of British breed, changed, ameliorated, and at last perfected by the admixture of eastern blood, and judicious crossing afterwards. *English Essay.*

Disease among Horses.

A farmer from Tioga county writes that there is a complaint lingering about the horses in some parts of the county, which is called the *Quinzy*, which is very much dreaded. It appeared first in June, 1848. The symptoms are—general stupidity of the animal, and a swelling under the throat at the butt of the jaws. The food comes out of the animal's nose, and occasionally, also, their drink. Several valuable animals have died.

Will the editors inform us as to this disease, and the best remedies for it, and whether it is the same disease so fatal to horses on Long Island, in 1846? J.

We should be pleased to have the suggestions of our veterinarians on this subject. Eds.

Mushrooms.

A great number of *fungi* of a poisonous nature, bear a near resemblance to the mild eatable mushroom, so that even the best judges of them are liable to occasional deception. The following description of of the true mushroom may be useful to those who intend to gather or to purchase this vegetable. The *gills* or under part of the cap are loose, of a *pinkey-red*, changing to a liver-color, situated close to the stem, but not united to it; very thick set, irregularly disposed, some forked next the stem, some next the edge of the cap, and some at both ends, in which case the intermediate smaller gills are generally excluded. The *cap* or pileus is externally white, changing to brown when old, and becoming scurfy; it is regularly convex, fleshy, flatter when old, from two to four inches, but sometimes even nine inches in diameter; it liquifies as it decays; the flesh is white. The *stem* is solid, white, cylindrical, from two to three inches high, half an inch in diameter. The *curtain* or membrane which extends from the stem to the edge of the cap, is white and delicate. When the mushroom first makes its appearance, it is smooth and almost globular, and in this state it is called a button. This species is esteemed the best and most savoury, and is much in request for the table. It is eaten fresh, either stewed or broiled, or preserved as a pickle, or in powder: it also furnishes the sauce called ketchup. The field plants are better for eating than those raised in artificial beds, their flesh being more tender; but the cultivated mushrooms are better looking, may be more easily collected in the proper state for eating, and are firmer and better for pickling. The wild mushrooms are found in parks and other pastures where the turf has not been plowed up for many years. The best time for gathering them is in August and September.

Those who are accustomed to mushrooms can distinguish the true from the false *by the smell*. The following test will be found useful to other persons: Sprinkle salt on the spongy part or gills of the mushrooms to be tried. If they turn yellow, they are poisonous; if they turn black, they are good. Allow the salt to act a little time before you decide as to the color.

Characters of false Mushrooms or Poisonous Fungi. They have a warty cap, or else fragments of membrane adhering to the upper surface; they are heavy, they emerge from a *vulva* or bag; they grow in woods and shady places, or in tufts or clusters on the trunks or stumps of trees; they have an astringent styptic taste and a pungent and often nauseous odor; they become blue after being cut; they are moist on the surface; they possess an orange or rose-red color, they turn yellow when salted. Mushrooms which possess any of these properties, are to be shunned as dangerous.—*Canadian Agriculturist.*

The Wheat Midge.—*Cecidomyia tritici.*

This insect, whose appearance in this country was first noticed about thirty years ago, has been gradually spreading westward. For several years, while it was committing great injury in some of the New England States, and in Lower Canada, it was not seen in the Mohawk valley. The period of its appearance in Western New York is still more recent. No farther west than Syracuse, no particular complaint was heard in regard to it, till 1846, when the wheat crop was reported to have been so much damaged by it, that the culture of that grain was considerably lessened in consequence, the succeeding season. The present season we hear of its ravages in the Genesee valley, and in the state of Ohio. It has doubtless prevailed more or less in those sections for several years, but not in such numbers as to attract notice from the damage it occasioned. In 1843, the writer of this article discovered a few specimens of this insect in the interior of Ohio. The present season the wheat crop in some sections of that state has been seriously affected by it. The *Ohio Cultivator* says—"Some entire fields, which promised well at the time of blossoming, are wholly destroyed by this new devastator." The same insect is said to have attacked the oat crop also, which, in some instances, has been much injured by it.

The great inquiry, of course is, for some defence against so formidable an enemy. Where the insect has formerly prevailed, various means have been used to ward off its attacks. As regards spring wheat, we believe the most successful expedient has been *late sowing*. If sowed the last of May or first of June, the crop would not come into bloom till the insect had gone, or ceased to do damage. An opposite expedient was found best for winter wheat. It was observed that the earliest was least injured by the insect; and this suggested the idea of sowing early varieties, early in the season, where winter wheat was cultivated. Hence the *Mediterranean*, an early variety of winter wheat. was found to escape in a great degree, when later kinds were destroyed. It was beyond the state to be injured by the midge, at the time of its attack.

This kind of wheat was first introduced here on account of its properties in resisting the attacks of the Hessian fly—*Cecidomyia destructor;* but its comparative exemption from injury by this insect, was from a quality quite different from that by which it escaped the midge; it was thought to be owing to the leaf or sheath adhering so closely and firmly to the stalk, that the worms, which are hatched in the furrows of the leaf, were unable to obtain a lodgement within the sheath—the latter being the natural situation for its principal growth and perfection. For several years after the introduction of this variety, it seemed to be almost proof against the Hessian fly; but latterly, as we are told, it appears to have lost, in becoming acclimated, more or less of the peculiar property for which it was at first so highly valued.

The *Black-sea* wheat is a spring variety, which has been cultivated with advantage in sections where the midge has prevailed. The reason of its success is, that it bears late sowing better, with less liability to *rust*, than other varieties.

Thus it is seen that it is on account of *opposite* qualities that certain kinds of winter wheat and spring wheat escape the midge, and that these qualities are still different from the quality which exempts one variety from injury by the Hessian fly.

We would suggest the importance of attention to the proper names of insects. Confounding several species under the same name, is a common error. For instance, the wheat midge is spoken of as "the fly"—a term which, by common consent, has been almost universally given to the Hessian fly—a different species from the midge, and very different in its habits and manner of attacking the wheat crop. In other instances the midge is called "the weevil," "wheat worm," &c.—names which have been given to very different insects. A little study of the important science of entomology, would prevent this confusion, and enable all to converse or correspond understandingly in regard to different insects, and the best modes of preventing their ravages.

There are various parasitical insects which attack and destroy the Hessian fly and the wheat midge. The most important in regard to the former, is a fly call *Ceraphron destructor*. We do not know that this insect has ever been known to attack the wheat midge. A writer in a late number of the *North British Agriculturist,* speaks of a *beetle* which he had found within the glumes of wheat, stinging the larvæ of the midge.—He supposes the beetle to have been the *Ceraphron destructor,* which must be a mistake, as that insect is described by entomologists as a *four-winged fly*.

But the parasites of the wheat midge, are probably but imperfectly known in this country. Dr. FITCH, in his essay, published in the N. Y. State Society's *Transactions* for 1845, observes that four or more species are known abroad, which destroy the worm or larvæ of the midge.

Dr. F. states that one of the most effective destroyers of this insect, in this country, is the common *yellow bird*. He observes:

"Fields much infested by the insect, have been for many years recognized even by passers on the highway contiguous to them, by the rough and ragged aspect of the heads of the grain. I am not aware that the cause of this peculiar appearance has ever been stated in any of the communications that have appeared in our agricultural papers. It results from the operations of this bird. Alighting, it adroitly grasps the wheat stalk just below the ear, and clinging fearlessly to it, even when swayed to and fro by the wind, it with its bill parts down the chaff from the grain, and one after another of the worms to which it thus gains access are rapidly picked off and devoured. Thus several heads are generally freed from the worms, ere its repast is completed. That it is the worms and not the grain that it is in pursuit of, is readily ascertained by an inspection of the heads after the bird has left them: many of the kernels, not being sufficiently loosened to drop to the ground by the operation, will be found remaining, the maggots that were upon them only having been removed; whilst those kernels of the head which are not infested by the worm, are passed over untouched. It is curious that this little creature, by a tap with its horny bill, or some other process, is enabled to distinguish those scales of chaff which conceal so minute a worm, from those which do not; a knowledge which we only arrive at when we have parted down the chaff. A flock, numbering about fifty, embracing both male and female birds, appeared to make the field which I examined on the 16th of June their constant resort, for a period of three weeks or more, where they could be seen busily occupied almost constantly every day. The number of worms consumed by them during this time must have been immense; and I cannot but believe that this lovely bird will henceforward be esteemed for its utility, as much as it has heretofore been for its beauty."

Many artificial modes of destroying this insect have been suggested, and more or less tried, most of which have proved failures. Slaked lime has been recommended to be sown on the heads of the wheat, while it is in blossom; but some careful experiments, instituted at the request of Dr. Fitch, showed that the lime had no effect whatever in preventing the fly from depositing its eggs within the chaff. Dr. F. however, suggests a mode which appears much more feasible. He says:—

"A method is sometimes resorted to abroad, for saving grain fields from the depredations of certain insects of peculiar habits. A rope is drawn along over the grain by two men walking at a brisk pace; which rope thus knocking against the heads of the grain, causes the depredators to drop themselves instantly on the ground, and it is a slow and tedious task for them to get up to the heads of the grain again. A similar process, but with a different apparatus, I contemplate employing against the wheat-midge. This apparatus is a light net made of gauze, three or four feet deep and one or two rods long; its mouth reaching the entire length of the net, and opening to a width of about eighteen inches. A small rope is to be stitched to the upper and another to the lower side of the mouth, reaching slightly beyond the net at each end, which is to be carried by two persons holding the ends of these ropes. If on closely examining the wheat-fields of my vicinity, from the time that the heads begin to protrude from their sheaths, the fly is found to be gathering in swarms in any one of them, I intend repairing to that field in the evening, when the insects will be hovering in such myriads about the heads of the grain, and, with an assistant, carrying the net so that the lower cord will strike a few inches below the heads of grain, the upper one being held nearly a foot in advance of it, and about the same distance above the tops of the heads; by keeping the cords tense and walking at a uniformly rapid pace from side to side of the field, until the whole is swept over, I shall be much disappointed if *countless millions* are not gathered into the net, which is to be instantly closed whenever a pause is made, by bringing the cords together. It is now to be folded or rolled together into a smaller compass, and then pressed by the hands or otherwise so as to crush the vermin contained within it. This measure has been suggested to me, by observing the perfect facility with which the small entomological fly-net becomes *filled* with these flies, on sweeping it to and fro a few times among the heads of infested wheat in the evening. Of course this operation should be resorted to on the first appearance of the fly in numbers, and before its eggs have been deposited so profusely as will occur in the course of a few days. I feel strongly confident, that by sweeping over a field a very few times in the manner above described, the fly may be so completely thinned out and destroyed, as to be incapable of injuring the crop perceptibly."

Cement for Floors

Eds. Cultivator—I have a question to ask about cement for a floor to stand frost. Somewhere in the *Tr. Cultivator*, it is said that sand and coal ashes mixed with coal tar, make a good floor for a yard. Now, the thought came into my head, that hydraulic cement and sand in the same proportions as when used for plastering a cistern, mixed with coal tar, would make a good floor for a piazza. As a certain portion of water is needed to make the cement "set," as it is technically called, the question seems to arise whether it would not be proper to mix the cement first with water, and the sand with coal tar, and immediately afterwards incorporate them in the proper proportions. This would seem to me to be the most proper way, as a certain portion of water is necessary to pass into the solid state with the cement to render it hard; and the coal tar would, I think, secure the whole from the action of the frost. I have no means of trying the experiment, as the coal tar is not to be had in this quarter. What is the price per barrel with you? And how many square feet, in your judgment, will the cement made from a barrel cover with a sufficient thickness to be permanent? C. B. *Princeton, Bureau Co,, Ill., July 12, 1849.*

We learn from Mr. Merrifield, the secretary of the Albany Gas-Light Company, that they have coal tar for sale at $1.25 per bbl. of 30 gallons, *without* the barrel, or $1.75 *with* the barrel. We should be glad to receive an answer to the other inquiries of our correspondent. Eds.

Harvesting Machines.

The *Prairie Farmer* states, that without the use of machinery in gathering the grain in that section, the harvests of the two past years would have gone to some extent ungathered. It adds that the use of those machines will be much increased the present season, and offers the following estimate:—"McCormick's Reaper has been now sold in the West for three seasons extensively, and somewhat before that. The sales amount, say to the following figures: For the year 1847 to 500, the year 1848 to 800 and 1849 to 1,500—equal to 2,800 in all. Other reapers of various patterns have been put in use, say to the number of 100. Of Estorly's Harvester the whole number in use this harvest, may reach 180. Each Reaper will save as claimed, with the horses attached to it, the labor of four and a half men. Each Harvester, it is claimed, with the horses employed, will save the labor of twenty men. Our 2,900 Reapers will then stand in the place of 13-050 men; and our 180 Harvesters will displace 3,600 in addition, or 16,650 laborers. In this estimate we count the day's work of the Reaper at 12 acres, and of a Harvester at 16 acres, each being run with four horses—the latter attended by four men.

Sheltering Manure.

Manure which is protected from evaporation or washing, is richer or stronger than that which is exposed. The advantage of cellars for manure, is that they keep the manure in its natural condition, unchanged, and therefore secured against waste. The system of feeding stock in "boxes," now considerably practiced in England, is recommended, partly on account of the better quality of manure so produced. The animals are kept thoroughly littered, so that all the urine is absorbed. We do not discover that the system has any advantages over our mode of feeding in barns and depositing the solid and liquid manure, properly mixed with absorbing substances, in cellars or under sheds.

The following analysis, made at the English Agricultural College, shows the difference in box manure and yard manure—or that which had been sheltered and that which had been exposed in a yard, in the ordinary manner:

	Box Manure. Per cent.	Yard Manure Per cent.
Water....	71.04	71.00
Nitrogenised matter, capable of yielding ammonia, 100 parts *dried*.................	2.37	1.07
Salts soluble in water, containing organic and inorganic matter	10.07	4.06
Organic	5.42	1.82
Inorganic	4.28	2.78
Phosphoric acid.............	0.03	0.26
Alkalies—Potash and soda...	2.00	0.08

Vegetable Manures.

Nature, when untrammelled by art, rears most luxuriant crops upon her fields, and yet the surface continually increases in fertility, never exhausted, but becoming richer each succeeding year. Let us suppose some few seeds to be borne by the wind from a distance to some naked surface entirely destitute of tree, shrub, or even a blade of grass, but still of a nature fitted to support vegetation, i. e. containing the inorganic constituents of plants. The seeds take root, and struggling, at length send forth their tender leaflets to the light. The process of vegetation then goes on with greater rapidity: the dew of heaven, or the grateful shower supplies it with certain necessary constituents, and its leaves gather the carbonic acid contained in the air. Thus the plant comes to maturity and then withers and dies, but all the elements which it has drawn from the earth are returned to it, and besides, a large amount of carbon, which has been gathered almost wholly from the atmosphere. As the tender plant of a succeeding year springs up, it receives part of its substance from the decaying vegetable matter of a previous growth; a more vigorous vegetation is the result, and still the deposite of the previous year is only in part taken up by the second growth; thus there is an accumulation of carbonaceous matter from year to year. If the vegetation thus springing up, be of such a nature that the plants do not die annually, but flourish for years and even centuries; still there is a continual accumulation of vegetable matter by reason of the annual deposits of leaves and decayed branches; such deposits give the soil a dark rich appearance, and when the land has been cleared and broken up, it yields fine crops for a long time. In many localities, the carbonaceous matter, having accumulated for centuries in the manner described, has become so thoroughly incorporated with the soil, extending sometimes to the depth of several feet, that the fields will continue fertile for many years; such is the condition of the prairies of the west. When the substances mentioned accumulate upon the surface of low swampy grounds, they do not become mixed with the soil, but there is finally presented, a deposite of black, half decomposed vegetable matter; this material has received the names, *vegetable mold*, *muck*, and *peat*.

We learn from the natural changes given, that nature has made ample provisions for the return of he raw material of which plants are made, to the soil; and she does not stop here, but continually increases the fertility of her fields, providing a surplus of vegetable nourishment.

The art of cultivation should so far imitate nature as to supply a sufficient return for the matter taken from the soil by each crop. Not that there should be a return weight for weight. for that would be impossible and wholly unnecessary, but unless the soil has a bountiful supply of fertilizing material, the process of continued cropping will immediately exhaust it. There is no more economical method of preventing this result than the application of vegetable manures, either in the form of refuse straw, hay, &c., of the farm-yard, or that of vegetable mold from the swamp; not that these substances alone will in all cases be sufficient, but they are easily obtained and contain most of the constituents of plants.—*Eaton's Agricultural Chemistry.*

Nutriment in different Crops.

The different kinds of crop usually raised differ materially in the proportions which they contain of the different essential constituents now enumerated, as required for the support of animals, and the practical deductions to be derived from the chemistry of the subject, will at once be apparent from an examination of the following tables. If we suppose an acre of land to yield the following quantities of the usually cultivated crops, namely:—

Of wheat.........	25	bushels,	or	1500 lbs.
Of barley	35	—	or	1800 —
Of oats......	50	—	or	2100 —
Of peas............	25	—	or	1600 —
Of beans.........	25	—	or	1600 —
Of Indian corn....	30	—	or	1800 —
Of potatoes.......	12	tons,	or	27,000 —
Of turneps........	30	—	or	67,000 —
Of wheat straw...	—	—		3000 —
Of meadowhay...	1½	—	or	3400 —
Of clover hay.....	2	—	or	4500 —

The weight of dry starch, sugar, and gum,—of gluten and albumen—of oil or fat, and of saline matter, reaped in each crop, will be represented very nearly by the following numbers:—

	Woody. Fibre,	Starch, Sugar, &c.	Gluten & Albumen,	Oil or Fat,	Saline. Matter.
Wheat,	220	825 lbs.	180	45	30
Barley,	270	1080	210	50	36
Oats,	420	1050	290 ?	100	75
Peas,	130	800	380	35 ?	45
Beans,	160	640	450	40	50
Indian corn,	270	900	180	150	30
Potatoes,	1350	3240	600 ?	90	24
Turneps,	2000	6700	800 ?	335 ?	600
Wheatstraw	1500	900	40	60	15
Medowhay,	1020	1760	240	120	220
Clover hay,	1120	1800	420	200	400

—*English Paper.*

Agricultural Shows.

New-York State Society.—At Syracuse, 12th, 13th, and 14th of September.

Wayne County, N. Y.—At Palmyra, 26th and 27th of September. The same society will hold an exhibition at Rose Valley, the 3d and 4th of October.

Oneida County, N. Y.—At Hampton, 26th and 27th of September.

Maryland State Society.—At Baltimore, 10th, 11th, and 12th of October.

Suffolk County, N. Y.—At Greenport, October 2d.

Herkimer County, N. Y.—At Herkimer, 27th September.

Wool Depot.—Mr. H. Blanchard, of Kinderhook, has erected a large building for a wool depot, at Shoreham landing, on Lake Champlain. So far as we learned, in our late visit to this section, it is the general intention of the wool-growers to send their wool to this depot. We were pleased to notice the improvement which has been made in cleansing and putting up fleeces for market.

Horse-chestnuts made edible.—The bitter, green oil, is removed by first grating them to a pulp, then adding one-fiftieth (1-50) by weight of carbonate of soda. The mixture is then thoroughly washed and racked, by means of a clear fountain, and a white and agreeable paste subsides, which is manufactured into bread and cakes.

Antidote to poison.—It is said that a desert spoonful of ground mustard, mixed in a tumbler of warm water, and drank immediately, acts as a speedy emetic, and may be used with safety. In the absence of any thing better, a large draught of warm water is one of the best general antidotes for poison, as its immediate tendency is to dilute it and soften its virulence, and induce vomiting.

Black Ants.—Gum Camphor laid in the tracks of ants is said to be excellent for keeping away these troublesome insects.

Domestic Economy, Recipes, &c.

Useful Recipes.

Eds. Cultivator—Will you please to publish the following method of making good bread with flour of grown wheat.

With a large spoon or stick, stir boiling water into the flour; then, to cool it before putting in yeast, mix in more flour and cold water. Work in enough flour to prevent its spreading out flat in the pans.

Cure for Dysentery.—The following recipe may prove of more value to many of your readers than their subscriptions for your paper.

To check a dysentery or summer complaint. Equal parts of sumach leaves or bark, catnip and peppermint; steep in hot water; drink frequently, and use for injections. In these complaints, especially in the dysentery, the bowels become coated with canker, which comes off, together with their lining, often accompanied with blood and mucus, which leaves them so raw and inflamed, that their contents moving through them causes excruciating pain. This decoction will cleanse the bowels, and to assist their healing, take powders or pills of Cayenne pepper, and use a tea of the same. To make the sumach "drink" palatable, put in it the seeds, (which are very acid,) and sweeten it.

Neither *these*, nor *any* medicine will avail in these complaints, if a strict diet is not observed. A person would sooner recover on rice water alone, *without* medicine, than *with* medicine and hearty food.

W. L. F. *Milwaukie, Wis., June* 11, 1849.

Butter—Is improved by working the second time after the lapse of 24 hours, when the salt is dissolved, and the watery particles can be entirely removed.

Raspberry Syrup.—To every quart of fruit add a pound of sugar, and let it stand over night. In the morning, boil and skim it for half an hour; then strain it through a flannel bag, and pour it into bottles, which must be carefully corked and sealed. To each bottle add, if you please, a little brandy, if the weather is so warm as to endanger its keeping.

Raspberry Jam.—Take one pound loaf sugar to every pound of fruit; bruise them together in your preserving-pan with a silver spoon, and let them simmer gently for an hour. When cold put them into glass jars, and lay over them a piece of paper saturated with brandy; then tie them up so as carefully to exclude the air.

Blackberry Syrup.—We are indebted to a friend for the following receipt for making blackberry syrup. This syrup is said to be almost a specific for the summer complaint. In 1832 it was successful in more than one case of cholera.

To two quarts of juice of blackberries, add one pound loaf sugar, ½ oz. nutmegs ½ oz. cinnamon, pulverised, ¼ oz. cloves, ¼ oz. alspice, do. Boil all together for a short time, and when cold, add a pint of fourth proof brandy. From a teaspoonfull to a wine glass, according to the age of the patient, till relieved, is to be given.

Currant Jelly—Place the currants in a stone or glass jar, and suspend this jar in a vessel of boiling water until the currants are in a condition to yield their juice readily; then place them, while hot in a bag, and press out the juice; add pure double-refined loaf sugar, and then boil until it jellies: this point is ascertained by dropping a portion on a cold plate, and if it will hold fast with the plate upside down, it is done, and should be removed from the fire. Should any scum arise, it may be skimmed off. Put the jelly, while hot, into jars, and cover tightly. Our experiment last year resulted thus: Twenty-seven quarts of currants gave twenty-nine pints of juice, and with twenty-nine pounds of double-refined sugar, gave eighteen and a half quarts of very superior currant jelly. Those who suppose that currant jelly can be made with common brown sugar, or even with inferior loaf sugar, will find themselves without a market, as an inferior article cannot be sold. —*Selected.*

Small Beer.—For making three gallons of beer, take one quart of molasses, 20 drops oil of spruce, 15 drops oil of winter-green, 10 drops oil of sassafras; add hot water to make the requisite quantity; mix the ingredients well; let the liquor stand till it is blood-warm, then add one pint of yeast; let it remain ten or twelve hours; bottle it, and in three hours it is fit for use.

Answers to Correspondents.

Turneps with Corn.—F. G. R., Shadwell, Va. On rich land very good crops of English turneps are sometimes obtained, by scattering the seed broadcast over the ground at the time of the last hoeing. If the season is dry, the turneps seldom amount to much; but if it is sufficiently wet, they will grow well, after the stalks are topped; or if the stalks are not cut, and the corn is cut up and shocked at the proper time, the turneps, having the ground to themselves through the autumn, will acquire a good size.

Cisterns for Watering Stock.—W. J. P., Lakeville, Ct. There is no objection to watering stock from cisterns, properly made. Make them so deep in the ground that they will not be much affected either by the heat or cold of the atmosphere.

Whitford's Corn-Sheller.—W. E. W., Peoria, Ill. We have no information in regard to this implement, except what is contained in the article to which you allude—Cultivator for 1843, p. 34.

Dairy Salt.—P. W., Herkimer, N. Y. Pure rock salt, ground fine, has generally given satisfaction, for the preservation of butter. The article is prepared in a nice manner by C. N. Bement, of this city, and put up in bags of twenty pounds each.

THE FLOWERS.

BY MRS. E. C. KINNEY

Where'er earth's soil is by the feet
Of unseen angels trod,
The joyous flowers spring up to greet,
These visitants of God.

They on celestial errands move
Earth noiselessly to bless,
Oft stooping down in balmy love,
The flowerets to caress.

And thus, their breath its fragrance leaves
Among the woodland blooms,
And breathing sense. through flowers receives
Angelical perfumes.

The scarlet or the crimson tips
That flowery petals wear,
May be the vermeil from the lips
Of angels painted there.

While spirit-whispers safely lie
Within each chalice hid,
That mutely speak to Sorrow's eye,
And lift its drooping lid.

And ah. that crystal, glistening clear
Upon the tinted leaf,
May be an agel's holy tear,
Dropt there for human grief.

Forever hallowed then, as fair,
Are all the blessed flowers,
That scent with Heaven's ambrosial air
These fading earthly bowers.

Through flowers Love finds fit utterance,
And friendship solace lends:
For he that giveth Flowers perchance
An angel's message sends.

Notes for the Month.

Communications, have been received since our last, from Agricola. Newton Reed, Viator, T. J. R. Keenan, S. of N. R., J. H. Salisbury, A. S. Casseman, Wm. J. Pettee, Ambrose Stevens, A Farmer, Cyrus Bryant, L. D., R. H. Phelps, J. D. Patterson.

Books, Pamphlets, &c., have been received since our last as follows:—"Service-Pipes for Water," an investigation made at the suggestion of the Board of Consulting Physicians of Boston, by E. N. Horsford; from the author. "Illustrated Phrenological Almanac," by L. N. Fowler; from the publishers, Fowler & Wells, New-York. "Diseases of Winter"—Consumption, Coughs, Asthma, &c., their remedial and avertive treatment, by R. J. Culverwell, M. D.; from the publisher, J. S. Redfield, New-York.

H. R. R. The apples mentioned by you, never arrived.

Seedling Cherry.—A cherry, raised from seed by Dr. H. Wendell, of this city, has received the name of "Wendell's Mottled Bigarreau." From some specimens which we have received, we think it is a valuable variety. It is nearly as large as the Black Tartarian, and of a rich and excellent flavor.

Samples of Wool.—Mr. J.D. Patterson, of Westfield, Chautauque county, N. Y., has sent us handsome samples of wool from a yearling ram and ewe, imported from France by Mr. Taintor, of Hartford, Ct., in July, 1848. The weight of the fleeces is given as follows: ram 14 lbs. 8 oz.; ewe 10 lbs. 10 oz. The latter raised a lamb. Mr. P. says, "their wool was first well rubbed with soap, and they were then thoroughly washed in a clear stream of running water, and sheared as soon as they were dry."

Albany and Rensselaer Horticultural Society.—We had no opportunity of noticing the exhibitions of this society, held on the 20th of June and the 3d of July, as our June number had previously gone to press. The display on both occasions was highly creditable. At the first exhibitions the show of strawberries was very fine, and that of cherries equally so at the second. The premium for the best variety of strawberries was awarded to B. B. Hirtland, of Greenbush, for *Burr's New Pine;* for the best variety of cherry, (July 3d.) to E. E. Platt, of Albany, for *Black Tartarian.*

The exhibition of the 25th of July, in respect to gooseberries and currants, was superior to any ever held by the society. It was rather late in the season for raspberries and cherries, and the display of flowers, of out-door culture, was much lessened on account of the severe drouth. James Wilson, of Albany, presented forty-one varieties of gooseberries, receiving the premium for the greatest collection; and Henry Vail, of Troy, presented seventeen varieties, receiving the premium for the best collection and finest specimens. The premium for the best raspberry was awarded to H. Vail, for the *Falstolf;* for the best currant, to Jas. Wilson, for *Knight's Sweet;* for the best cherry, to Dr. H. Wendell, for *Wendell's Mottled Bigarreau.* Fine specimens of corn for boiling were offered by Mr. Douw and Mr. Kirtland, of Greenbush; and fine specimens of tomatoes, egg-plants, potatoes. cabbages, &c., by Messrs. Prentice, McIntosh, and others. Flowers were offered by Messrs. Rathbone, Douw, Wilson, Newcomb, Wendell, and others.

The Horse "Tornado."—When returning from our late excursion to Vermont, we called at Mr. E. Long's, Cambridge, N. Y. Mr. L. is extensively known as a breeder of blood horses, having been engaged in the business thirty years, and been the owner of several celebrated horses. He now owns "Tornado," a horse of much distinction on account of his blood and performances on the turf. He was by the famous American Eclipse, out of the noted mare Polly Hopkins. Tornado is now eleven years old. He was put on the course at an early age, and won several races with horses of repute; but was withdrawn in consequence of an injury received in one of his pasterns, while running. He will be recollected by some, as having received the first premium on blood horses at the N. Y. State Fair, at Saratoga. He is a horse of attractive appearance—has a fine head and eye, a beautiful glossy coat and clean limbs. It is thought he will make a good cross with the stock of the neighborhood. We saw none of his progeny, except a sprightly yearling colt, and a very pretty and active filly, two months old, from a thorough bred mare belonging to Mr. Thomas Fowler, of White Creek. Mr. Long showed us a black mare, three-fourths blood, as he informed us—a very handsome animal, and a fine traveller.

Stock for Sale.—Persons wishing to obtain fine stock, are referred to the advertisements, in this number, of Messrs. Bingham, Tilden, and Fairbanks. It will be seen that the gentleman first named, propose to offer cattle and sheep for sale at the State Fair at Syracuse. This occasion will undoubtedly afford an excellent opportunity for the purchase of good stock of all kinds.

Protection for Roses and tender Plants.—During a late call at the residence of J. S. Pettibone, Esq., Manchester, Vt., we were informed of a mode of protecting roses and tender plants from injury by frost, which we think valuable. Before winter sets in, small spruce trees, about four feet high, (which are readily obtained in many situations,) are, after they have been sharpened and the lower limbs taken off, set as *stakes* for the support of the shrubs. The shrubs are fastened round the stakes, and small hemlock, or cedar boughs, are placed round in a conical form, in sufficient quantity, (and but a thin layer is required, as they pack closely and exclude the air), to afford the desired protection. They remain in this situation till warm weather returns, when the boughs and stakes are removed. The spruces keep green all winter, and impart, during that dreary season, an enlivening aspect to the *parterre.*

Cotton Cloth Caps for Haycocks.—These have been tried in the eastern States with great success. They are two yards square, made by sewing two pieces of yard-wide sheeting together, with a stout hem at the ends, about two inches of the corners sewed back, to which strong cord loops are attached. Through each of these loops a sharp stick, a foot and a half long, is thrust into the hay, which secures it to its place. The cost is 30 cents each; that is, four yards, at 7 cents per yard, and two cents for twine and thread. If made during the long winter evenings, the cost of making need not be counted. The rain cannot wet the hay while these caps are on; and damaged hay, and tedious drying after showers, are done away. Now is the time to use them.

The Wheat Crop.—Accounts from the south, are generally favorable for the wheat crop. In the central and southern portions of Ohio, it is injured by rust, which struck in the latter part of June, and also by the wheat midge. From northern Ohio, we have heard no complaint. In Michigan, we learn from Mr. Mallary, of Macomb county, that the crop is promising He says the crop was sowed late for fear of the insect, [Hessian fly?] and no injury from that source had been experienced. From Illinois and Wisconsin, we hear favorable reports. In our own State, we believe the crop is as good as usual, though injured by the midge to some extent in the Western part of the State.

Postponement of the Ohio State Fair.—We learn that the Ohio Board of Agriculture have concluded not to hold a State Fair this year, on account of the prevalence of the Cholera in Cincinnati and other sections of the State.

Syrian Cattle.—We have seen it stated that Lieut. Lynch, U. S. N., brought to this country on his return from the Dead Sea expedition, a pair of calves, purchased at Damascus. It is said they have been placed in possession of Col. James Castleman, of Clarke county, Va. We have as yet seen no *authentic* account or description of these cattle. Will Col. Castleman, or some person acquainted with the animals, be good enough to give us their history and characteristics.

Fattening Cattle on Hay.—Grass which is cut while it is in blossom, and carefully made, will fatten stock nearly as well in a dry, as in a green state. Some of the best farmers in the western part of Vermont, are particular in making their hay for this purpose. Mr. Bowdish, of Weybridge, whose stock is well known for its good qualities, and fine condition, informed us that he found no difficulty in making his cattle thrive on hay. His oxen and steers are fed liberally on the best of hay through the winter. With careful driving, they perform the farm labor in spring without loss of flesh, and being turned on sweet pastures, at the proper time, they get in high order for early beef for the Boston market, and always command a good price.

Keeping Hens.—Mr. J. M. Mason, of Orwel, Vt., usually winters two hundred hens. His practice is, to buy pullets in the month of November. He buys those which were hatched early, as such are the best to lay in the winter. They cost about twelve and a half cents each. They are fed in a great degree on *mutton*. Mr. M. buys sheep in the fall at low prices—about what their pelts and tallow are worth. The carcasses are boiled, the tallow saved, and the flesh and bones, after being allowed to freeze, are kept till spring,—a suitable portion being fed to the hens, daily. They are allowed, in addition to the meat, a little corn, oats, or buckwheat. They lay well through the winter—comfortable quarters being provided for them—and continue to produce eggs in abundance till June. It is found most profitable to sell the whole stock at this period, as they are generally fat, and will bring from twenty to twenty-five cents a-piece. If kept through the summer, they lay but little in the warm months, the eggs will keep but a short time, the fowls grow poor in moulting, and if kept another year will not lay as well as young ones. Mr. M. keeps hens only, (no cocks,) and is inclined to think he obtains as many eggs, and that they keep better when not impregnated. As to varieties, he has tried several, and thinks the *top-knots* will generally lay rather more eggs the first season; but their carcasses are of less value than most other kinds.

Maple Sugar.—The last spring was a favorable one for the manufacture of maple sugar. Vermont, as usual, produced a large quantity—we have no means of knowing how much, but is an article of great value to the state. We are informed that the process of making has been much improved within a few years. Instead of boiling the sap in cast-iron kettles, it is boiled in shallow pans and cooled in wooden or tin vessels. The sugar is thus freed from the dark color and *irony* taste which it almost always had when made in the old mode. In our late trip to Vermont, we saw some very handsome samples of maple sugar, particularly at Mr. Hines', in Brandon, and Mr. Dean's, in Manchester. Mr. H.'s was a sample of about five hundred pounds, which was of such a quality that it would have sold by the quantity for 12½ cents per pound. Maple trees yield from two to four pounds of sugar each, in a season, and a good "grove" affords a handsome edition to the income of a farm.

Mowing Pastures.—We have before spoken of the necessity of keeping the grass of pastures from running up to seed and dying on the ground. As grass grows with more rapidity in the early part of the season than at a later period, it is difficult to keep it properly fed down, without putting on more stock than can be kept on the land after the *flush* of feed is over; and yet, if the grass goes to seed and lies on the ground, the after-feed will be less in quantity and of poorer quality. The difficulty may be overcome by mowing the grass at the right time—before it has run to seed, at all events. This may be done on many pastures to good advantage, the hay obtained being of good quality for any kind of stock; and the pastures are left clean, start equally, and afford a good growth of fresh after-feed. We have lately met with several farmers who have followed this practice for many years, and they agree with us in regard to its utility.

Usefulness of Swallows.—While visiting a friend in the country, a few weeks since, we noticed, under the eaves of a barn, near the dwelling, about fifty swallows' nests. The bird was the *Hirundo fulva*, or Cliff-swallow, of ornithologists. In most of the nests there were young, and the old birds were very assiduous in providing them with food. We observed them at different times in the day, and not a minute elapsed in which one or more birds did not return to the nests with something for the young. Their food consisted of winged insects taken in the air; and the numbers which were thus destroyed by this colony of swallows, must have amounted to thousands, each day. We were informed that no flies, or very few, were to be seen around the house or barn—the family and the domestic animals of the farm, being thus freed from a disagreeable annoyance.

Large Corn Crop.—The *Ohio Cultivator* states that John Longhry of Adams Co. raised 1500 bushels of shelled corn on eleven acres, or 136½ bushels per acre for the whole field.

Prices of Agricultural Products.

New-York, July 24, 1849.

FLOUR—Genesee, per bbl., $5.06a$5.18¾—Western, $4 75a $4.81.—Fancy brands, $5.50a$5.62½.

GRAIN—Wheat, per bush., $1.16a$1.25—Corn, 56a60c.—Rye, 57½c Oats, 34a35c.

BUTTER—best, per lb., 18a20c.—western dairy, 12½a14c.

CHEESE—per lb., 5a6c.

BEEF—Mess, per bbl., $13a$13.50

PORK—Mess, per bbl., $11—Prime, $9a9.12½.

LARD—per lb., 6¾a7½c.

HAMS—Smoked, per lb., (best) 12½a14c.—Western 7c

HOPS—per lb., first sort, 6a8c.

COTTON—Upland and Florida, per lb., 9¾a10c.—New Orleans and Alabama, 7¾a9¾c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	36a38c.
" half blood do.,	31a33c.
" one-fourth blood and common,	29a30c.

Remarks.—There is a general buoyancy in the market Cotton brisk and in demand. Flour and meal in good demand for the east. Provisions are firm, and prices for meats generally upward. There is a fair business in wool,—prices tending upward

To Nurserymen, Gardeners and Horticulturists.

HAVING completed my arrangements with nurserymen in England, France and Belgium, I am prepared to import from any of the above places, any thing required in the business, on the most favorable terms, and special attention given to the forwarding without delay, all goods imported by me or consigned to my care by others.

I will also give personal attention to the purchase or sale of any thing in this market, or neighboring nurseries, for distant nurserymen. Being advised of the various stock in the different nurseries, I can always do this to advantage.

FOR SALE—Russia Mats, Osage Orange Seed, Plum and Cherry pits, Propagating glasses of all sizes, Flower pots, &c., at

GEO G. SHEPPARD'S
Horticultural Agency, 145 Maiden Lane, New-York.

August 1—1t

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated NORTHERN SPY, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*. the *Ladies' Sweeting*, *Peck's Pleasant*. *Swaar*, *Baldwin*, *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*, and *Van Mon's Leon Le Clerc*. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

Sale of Hereford Cattle.

THE Messrs. BINGHAM, of Vermont—brothers—propose to sell at public auction, on the Show Ground of the New-York State Fair at Syracuse, from ten to twenty head of Hereford Cattle, 3 years old and under—bulls and heifers. Our cattle—Herefords—to found our herd. were purchased of Messrs. Corning and Sotham, about three years ago. We have been disposed to give these cattle a fair trial, to see what their merits would prove to be, before offering them to the public. We have come to the conclusion that no race of cattle can compete with them when all their good qualities are taken into consideration. We are resolved to push ahead in the cultivation of the Herefords, as being a race, affording the best profits for keep and care, and proving themselves first class cattle for all the purposes of the breeder. They make a noble cross with the Durhams or their grades, as well as with the native stock, showing a great and decided improvement. We offer these cattle to the public with the strong conviction that they will prove a desirable acquisition to any herd.

PURE BRED MERINO SHEEP.

We shall also offer at private sale. a large lot of pure bred Merino Sheep, from imported sires. The breeders of sheep will do well to look over our flocks, before purchasing elsewhere. We sell no mongrels, or grades. or worthless sheep for great prices;—but we mean to deal fairly with those who purchase of us, and sell them our best blooded sheep, at fair remunerating prices—so that they shall prove a decided improvement to the flocks with which they may be placed.

August 1.—1t.

Hereford Bull.

FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sotham, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State. J. P. FAIRBANKS.

St. Johnsbury, Vt., Aug. 1.—3t.

Saxon Sheep.

THE subscribers having disposed of their pasture lands, now offer their entire flock for sale. They will also offer about 70 Bucks and Buck Lambs at auction, at Syracuse, on Wednesday or Thursday, the 12th or 13th of September next, on the grounds of the State Fair. Of time, due notice will be given

New Lebanon, N. Y., July 13, 1849. TILDEN & CO.

We refer to,

H. Blanchard & Co., Kinderhook Wool Depot.
Samuel Lawrence, Esq., Lowell
Sanford Howard, Esq., Albany.

August 1.—2t.

A Small Farm Wanted.

A Letter addressed to C. S., Newport, N. Y., will receive attention.

August 1—2t. *

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July.) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* GARDENING, *in a thoroughly practical as well as scientific sense.*
2. *To the* DESCRIPTION *and* CULTIVATION *of Fruit Trees.*
3. *To Gardening as an* ART OF TASTE, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*
4. *To* RURAL ARCHITECTURE, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators. and it is scarcely necessary to repeat, that Mr. DOWNING's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

TERMS—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Important to the Public.

HORSE AND CATTLE MEDICINES.

Don't permit your Horses or Cattle to die, when the means of cure are within the reach of all!

THE undersigned has spent several years in the study of Veterinary practice in "London and Edinboro'," he has also availed himself of the researches of Liebig, and other celebrated men, who have contributed so much towards a judicious treatment of animals. The principles of our practice consist in the rejection of general bleeding, and the total rejection of all medicines that experience has shown tobe of a dangerous tendency These remedies act in harmony with the vital principle, and when given according to the directions which accompany each article, they are capable of exciting and increasing the natural functions, without diminishing or destroying their power, hence are safe in the hands of every one

G. H. DADD, M. D

A LIST OF HORSE AND CATTLE MEDICINES.

Physic balls, 75c. per box.
Alterative ball, 75 c. do
" powders for bad condition, 75c. per package.
Heave powder for diseases of the lungs, 75c. do.
Urine powder for " " kidneys, 75c. do.
Tonic powder for bad condition of glanders, 75c. do.
Cordial drink for inflammation of bowels, 75 c. per bottle.
Liquid blister, 75c. per bottle.
Ointment for promoting the growth of hair, 50c. per pot.
Healing balsam for wounds and saddle-galls, 75c. per bottle
Wash for inflamed eyes, 50c. per bottle.
Ointment for mange, scratches, old sores, &c. 50c. per bottle.
Embrocation for sore throat, 75c. per bottle.
Hoof ointment for sand crack, brittle hoof, &c., 50c. per bottle.
Lorse Liniment, the most celebrated article known in England for lameness of every description, 75c. and $1 per bottle.
Distemper powder, for red water, $1 per bottle.
Worm powders, for the removal of worms from the intestinal canal, 75c. per package.

For sale by STIMPSON & REED, 26 Merchant's Row; also at DADD'S HORSE AND CATTLE MEDICINE DEPOT, Nos. 1 and 2 Hay market Square, Boston.

Pamphlets describing the diseases for which these remedies are used, can be had gratis.

Numerous Certificates are in possession of the Proprietors, of cures performed by the above medicines. June 1.—2*

The Farmer's Encyclopædia,

IN one volume, royal octavo, 1165 pages, beautifully bound; containing 17 fine plates, and numerous wood cuts. Edited by GOUVERNEUR EMERSON. A standard work of reference upon all subjects connected with farming and country life.

"Of all the Agricultural works that have been lately published, this appears the most likely to be of real service to the practical farmer."—*Central New-York Farmer.*

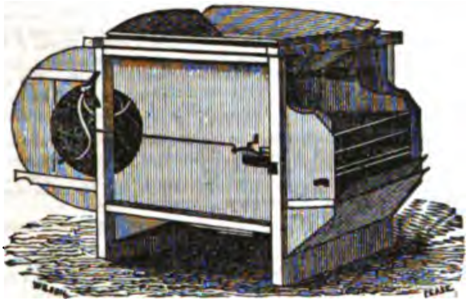
"It is a mine of wealth—no farmer should be without this truly valuable book."—*Burlington Gazette.*

Sold by Carey & Hart, *Philadelphia*; C. M. Saxton and John Wiley, *New-York*; Luther Tucker, and W. C. Little, *Albany*; Derby & Co., *Buffalo*; W. D. Ticknor & Co., and B B. Mussey, *Boston*; W. H. Derby & Co., and Ely & Campbell, *Cincinnati*; Whiting & Huntingdon, *Columbus*; Norton & Beckwith, *Louisville, Ky*; J. B. Steel, and Woodbridge & Co., *New Orleans*; M. Boullemet, *Mobile*; W. D. Skillman, *St. Louis*; N. Hickman, *Baltimore*; A. Morris, *Richmond, Va.*; H. D. Turner, *Raleigh, N. C.*; F. Taylor, *Washington, D. C.*

July 1, 1849.—1t.

I. T. Grant & Co.'s

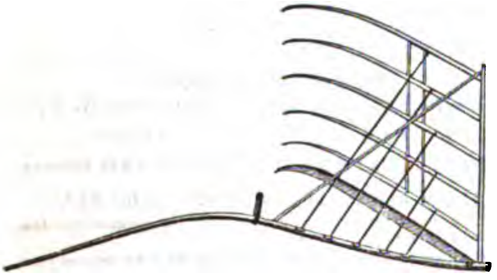
PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr. Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon J R Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T GRANT & CO.
Junction P. O., Rens. Co., 8 miles north of Troy.

May 1, 1849.—3t. eom.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal, troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

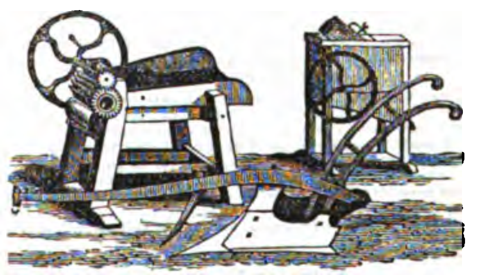
PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,
New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.



John Mayher & Co.

United States Agricultural Warehouse, 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment. Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.
New-York, Oct 1, 1848.—tf.

Agricultural Books,

Of all kinds, for sale at the office of The Cultivator.

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NOW IN THE PRESS,

TO BE PUBLISHED ON THE FIRST OF AUGUST,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A Greatly enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

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Known at the present time, relative to

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EXACT IMPRESSIONS

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—— Veterinarian, by S. W. Cole, 50 cents.
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—— Farmers' Encyclopedia, $4.
—— Flower Garden Directory, by R. Buist, $1.
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" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
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Domestic Family Receipt Book, by Miss Beecher, 75 cents.
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing, $3.50.

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, SEPTEMBER, 1849. VOL. VI.—No. 9.

Suggestions for Farmers.

Changes in Permanent Pasture or Meadow.

EDITORS OF THE CULTIVATOR—I am aware that the numerous correspondents of *The Cultivator* keep its pages so well stored with original communications, as quite generally to preclude the publishing of lengthy extracts from other sources. But the following remarks of Prof. JOHNSTON, upon "Permanent Pasture or Meadow," evince so much accurate and extensive observation, and, withal, so entirely correspond with the experience of intelligent farmers, that they may well find a place, at some time, in your columns. With this view, I have transcribed the accompanying extract, and if you think as I do about it, just present it to your readers whenever you find room for it, and I doubt not, the perusal will interest them. F. HOLBROOK.

When land is laid down to permanent grass, it undergoes a series of changes, which have frequently arrested attention, and which, though not difficult to be understood, have often appeared mysterious and perplexing to practical men. Let us consider these changes.

a. When grass seeds are sown for the purpose of forming a permanent sward, a rich crop of grass is obtained during the first, and perhaps also, the second year, but the produce, after three or four years, lessens, and the value of the pasture diminishes. The plants gradually die and leave blank spaces, and these again are slowly filled up by the sprouting of seeds of other species, which have either lain long buried in the soil or have been brought thither by the winds.

This first change, which is almost universally observed in fields of artificial grass, arises in part from the change which the soil itself has undergone during the few years that have elapsed since the grass seeds were sown, and in part from the species of grass selected not being such as the soil, at any time, could permanently sustain.

b. When this deterioration, arising from the dying out of the sown grasses, has reached its utmost point, the sward begins gradually to improve, natural grasses suited to the soil, spring up in the blank places, and from year to year, the produce becomes greater and greater, and the land yields a more valuable pasture. Practical men often say that to this improvement there are no bounds, and that the older the pasture, the more valuable it becomes.

But this is true only within certain limits. It may prove true for the entire currency of a lease, or even for the life-time of a single observer, but it is not generally true. Even if pastured by stock only, and never mown—the improvement will at length reach its limit or highest point, and from this time the value of the sward will begin to diminish.

c. This, again, is owing to a new change which has come over the soil. It has become, in some degree, exhausted of those substances which are necessary to the growth of the more valuable grasses—less nutritive species, therefore, and such as are less willingly eaten by cattle, take their place.

Such is the almost universal process of change which old grass fields undergo, whether they be regularly mowed, or constantly pastured only—provided they are left entirely to themselves. If mown, they begin to fail the sooner, but even when pastured they can be kept in a state of full productiveness only by repeated top-dressings, especially of saline manures—that is, by adding to the soil those substances which are necessary to the growth of the valuable grasses, and of which it suffers a yearly and unavoidable loss. Hence the rich grass lands of our fathers are found now, in too many cases, to yield herbage of little value. Hence, also, in nearly all countries, one of the first steps of an improving agriculture, is to plow out the old and failing pastures, and either to convert them permanently into arable fields, or, after a few years' cropping and manuring, again to lay them down to grass.

But when thus plowed out, the surface soil upon old grass land is found to have undergone a remarkable alteration. When sown with grass seeds, it may have been a stiff, more or less grey, blue, or yellow clay—when plowed out, it is a rich, brown, generally light and friable vegetable mould. Or when laid down it may have been a pale-colored, red, or yellow sand or loam. In this case, the surface soil is still, when turned up, of a rich brown color—it is lighter only, and more sandy than in the former case, and rests upon a subsoil of sand or loam, instead of one of clay. It is from the production of this change that the improvement caused by laying land down to grass principally results. In what does this change consist? and how is it effected?

If the surface soil upon stiff clay lands, which have lain long in grass, be chemically examined, it will be found to be not only much richer in organic matter, but often also poorer in alumina than the soil which formed the surface when the grass seeds were first sown upon it. The brown mould which forms on lighter lands will exhibit similar differences when compared with the soil on which it rests; but the proportion of alumina in the latter being originally small, the difference in respect to this constituent, will not be so perceptible.

The effect of this change on the surface soil is in all cases to make it more rich in those substances which cultivated plants require, and therefore more fertile in corn. But strong clay lands derive the further important benefit of being rendered more loose and friable, and thus more easily and more economically cultivated

The mode in which this change is brought about is as follows:—

1. The roots, in penetrating, open and loosen the subjacent stiff clay. Diffusing themselves everywhere *they gradually raise, by increasing the bulk of the surface soil*. The latter is thus converted into a mixture

of clay and decayed roots, which is of a dark color, and is necessarily more loose and friable than the original or subjacent unmixed clay.

2. But this admixture of roots affects the chemical composition, as well as the state of aggregation of the soil. The roots and stems of the grasses contain much inorganic—earthy and saline—matter, which is gathered from beneath wherever the roots penetrate, and is by them sent upwards to the surface. A ton of hay contains about 170 lbs. of this inorganic matter. Suppose the roots to contain as much, and that the total annual produce of grass and roots together amounts to four tons, then about 680 lbs. of saline and earthy matters are every year worked up by the living plants, and in a great measure permanently mixed with the surface soil. Some of this, no doubt, is carried off by the cattle that feed, and by the rains that fall, upon the land—some remains in the deeper roots, and some is again, year after year, employed in feeding the new growth of grass—still a sufficient quantity is every season brought up from beneath, gradually to enrich the surface with valuable inorganic matter, at the expense of the soil below.

3. Nor are mechanical agencies wanting to increase this natural difference between the surface and the under soils. The loosening and opening of the clay lands by the roots of the grasses, allow the rains more easy access. These rains gradually wash out the fine particles of clay that are mixed with the roots, and carry them downwards, as they sink towards the subsoil. Hence the brown mould, as it forms, is slowly robbed of a portion of its alumina, and is rendered more open, while the under soil becomes even stiffer than before. This sinking of the alumina is in a great measure arrested when the soil becomes covered with so thick a sward of grass as to break the force of the rain-drops, or of the streams of water by which the land is periodically visited. Hence the soil of some rich pastures contains as much as 10 to 12, of others as little as 2 to 3 per cent. of alumina.

4. The winds also here lend their aid. From the naked arable lands, when the weather is dry, every blast of wind carries off a portion of the dust. This it suffers to fall again, as it sweeps along the surface of the grass fields—the thick sward arresting the particles and sifting the air as it passes through them. Everywhere, even to remote districts and to great elevations, the winds bear a constant *small* burden of earthy matter; but there are few practical agriculturists who, during our high winds, have not occasionally seen the soil carried off in large quantities from their naked fields. Upon the neighboring grass lands this soil falls as a natural top-dressing, by which the texture of the surface is gradually changed, and its chemical constitution altered.

5. Another important agency also, must not be overlooked. In grass lands insects, and especially earthworms abound. These almost nightly ascend to the surface, and throw out portions of finely divided earthy matter. On a close shaven lawn the quantity thus spread over the surface in a single night often appears surprising. In the lapse of years, the accumulation of the soil from this cause must, on old pasture-fields, be very great. It has often attracted the attention of practical men,* and so striking has it appeared to some, that they have been inclined to attribute to the slow but constant labor of these insects, the entire formation of the fertile surface soils over large tracts of country.

I have directed your attention to these causes chiefly in explanation of the changes which by long-lying in grass, the surface of our stiff clay land is found to undergo. But they apply equally to other soils also—the only difference being that, in the case of such as are already light and open, the change of texture is not so great, and therefore does not so generally arrest the attention.

Upon this subject I may trouble you further with two practical remarks—

1. That the richest old grass lands—those which have remained longest in a fertile condition—are generally upon our strongest clay soils. This is owing to the fact that such soils naturally contain, and by their comparative impermeability *re*-tain, a larger store of those inorganic substances on which the valuable grasses live. When the surface soil becomes deficient in any of these, the roots descend further into the subsoil, and bring up a fresh supply. But these grass lands are not on this account exempt from the law above explained, in obedience to which all pastured lands, when left to nature, must ultimately become exhausted. They must eventually become poorer; but in their case the deterioration will be slower and more distant, and by judicious top-dressings may be still longer protracted.

2. The natural changes which the surface soil undergoes, and especially upon clay lands when laid down to grass, explain why it is so difficult to procure, by means of artificial grasses, a sward equal to that which grows naturally upon old pasture lands. As the soil changes upon our artificial pastures, it becomes better fitted to nourish other species of grass than those which we have sown. These naturally spring up, therefore, and cover the soil. But these intruders are themselves not destined to be permanent possessors of the land. The soil undergoes a further change, and new species again appear upon it. We cannot tell how often different kinds of grass thus succeed each other upon the soil, but we know that the final rich sward which covers a grass field, when it has reached its most valuable condition, is the result of a long series of natural changes which time only can bring about.

The soil of an old pasture field, which has been plowed up, is made to undergo an important change both in texture and chemical constitution, before it is again laid down to grass. The same grasses, therefore, which previously covered it, will no longer flourish, even when they are sown. Hence the unwillingness felt by practical men to plow up their old pastures—but hence, also, the benefit which results from the breaking up of such as are old, worn-out, or covered with unwholesome grasses. When again converted into pasture land, new races appear, and a more nourishing sward is produced.

Systematic Agriculture.

Importance of Farm Accounts.

Editors Cultivator—With a desire to make my subject more attractive to my brother farmers, a few facts have been presented in connexion with the leading and most important implements and machines used in our farming operations—facts which exhibit the advantages we possess at the present day, over those of our predecessors, in a strong light; and it seems to me so conclusive, that no prudent man, with a farm of over one hundred acres, should omit the constant use of them in their proper season.

Figures have been used to show the benefits actually derived by farmers in this region, and though the wages may vary in different localities, in some degree affecting the results; yet among thinking, careful men, who are not disposed to be exorbitant in the payment of wages, the figures and calculations presented, will probably be a guide to safe resolutions. It must not be expected that the farmer who permits stumps and rocks to encumber his grounds, can derive the necessary benefits offered by the use of the Reaper, or Seed Sower, or in short, any farm implement, in the same proportion as the farmer, who by perseverance has cleared his farm of these encumbering and wasteful foes. And it may be useful to repeat that, the very high rate of wages paid in this state and country for agricultural labor, as compared with most other nations, ought and must compel us, to seek for and use every well-made, simple machine that can bring the produce of our fields to yield a profit, in some degree equal to the profits of other professions and trades. This can now be done with the implements before described, if judiciously applied, and it makes good one of the principles with which these suggestions were started, viz:—that the power of a horse is equal to the power of six men, and by combination with farm machinery, this motor, (the horse) is equal to the combined efforts of twelve, or even twenty men in cultivating the earth.

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* The permanence of a fine carpeting of rich and sweet grass upon a portion of his farm, is ascribed (by Mr. Purdie) to "the spewings of the worms, apparently immensely numerous, which incessantly act as a rich top-dressing."—Prize Essays of the Highland Society, p. 191.

The subject of farm machinery need not be pursued farther, though many excellent implements have not been named,—we may all see and understand that the same principles are applicable to each.

It may be urged as an excuse for adhering to old and sluggish practices and habits, that the expenditure for the improved implements is onerous at the outset; true, but let us remember that *extraordinary* expense must find its *limit* in the value or worth of the object, and the statements made by me in the several communications to "*The Cultivator*," will, it is believed, easily lead to the reasonable estimates of the values desired.

And here we may as well allude to another and vastly important motive for the study of Order, System and Economy, and that is "*our expenses*." Men are very apt to hesitate at the price of a farm implement, but allow *ordinary* expenses to be incurred until the day of settlement, when an uneasy sense of surprise is manifested at the unexpected amount.

This often arises from the too convenient, but too seductive system of having store credits; a system of unintentional extravagance, which is rarely or never checked by the salutary, and I may say indispensable money saving system, of keeping an exact account of receipts and expenditures, from a bushel of grain to the cost of a plow-bolt. An *easy* system, by which we can see and know at any hour, the exact measure of our expenses—and of the results of our labor—by which we can with comfortable assurance encounter an extraordinary expense, or indulge our families in further ordinary comforts, while at other times, we can firmly deny any and every indulgence as our monitor, the "Farm Book," will most certainly indicate any existing necessity. In every vocation of life, we find men who are afraid to examine closely into their business accounts, and neglect them, lest melancholy should oppress them, or that some need for unwelcome change should appear; others feel as if the plow handle and the reins, unfitted the hand and head for the methodical arrangement of this class of facts. To the first it must be observed that a wound most certainly does there exist, needing cure, and *that* cure cannot and will not be effected, but by close searching and probing. To the second, it will be apparent upon reflection, that it is as easy for the hand to record the cost of a plow bolt, as to calculate the value of corn when taken to market. It is idle, therefore, to attempt any excuse, if the object is useful or desirable.

Be assured that it is not the lot of man to be profuse in expenses, and with the best in our land it is a truth, perhaps not agreeable, that, "if we are plentiful at our table, we must be saving in the stable.' How then can we establish a scale of expenditure which shall yield us all proper comforts, and without stint of measure to our stock?—Farm accounts, methodically, simply, and plainly arranged, at least once in every week, will infallibly give to every farmer the reliable truth, be it favorable or unfavorable. It necessarily gives him abiding confidence in his work, or it leads him with certainty to a remedy for an evil, which cannot be hidden from him.

Many may here exclaim, how easy to preach, but how difficult to practice! Not so, and I will endeavor to show that the practice is easier than preaching. Thus: Let the farmer have three books—

1st. A *time book*, in which is noted daily all the work of his farm, and the cost of the labor thereon.

2d. A *diary*, in which he writes, at least once a week, the expenditure and receipts of every kind and nature connected with his farm.

3d. An *account book*, (generally called a leger,) into which he enters on one side all the expenses incurred by any particular crop or object, and on the other, the receipts obtained from such crop or any object.

These entries being carried on once a week, from his diary into his account book.

This simple arrangement will, at any moment, on reference to his account book, exhibit to his eye, the cost of any particular object, of any crop; and at the end of the season, if he arranges the balances of the several accounts in proper order, it will show him the profit or the loss which has attended his labors. Under any circumstances of progress, or even of loss, the man who thus keeps a precise knowledge of his doings, must ever sleep soundly, and be blessed with a contented and happy frame of mind. He can enjoy and give enjoyment from his increasing stores; or, if unpropitious seasons or events beyond his control assail him, he sees the full bearing of his condition, he knows at once, that having done his duty, he can confidently and cheerfully rely, knowing that adversity has its comforts and hopes, leading, under Providence, to greater benefits than are yet evident to his senses.

As a class of men, it may, I think, be asserted, that none are less subject to loss than the farmer; because speculation and trading, do not and ought not ever to interfere with his higher duties; he knows that tilling the earth is the most natural method for obtaining wealth, for it is the natural blessing bestowed by our mother earth, for the care and attention we proffer to her. The returns may be slow, but they are sure, and far more sweet and enduring than the gains of any bargaining or traffic. As a general rule, then, a farmer will always find pleasure and comfort in consulting his farm-books of account; he will inculcate a habit of generous frugality, enriching the mind as well as the purse.

Without pretending to offer the best system of farm accounts, I venture to add the form of books I have seen, and which have been found satisfactory thus far to several Seneca county farmers. One week's work is here carried through the books, and though they may need more explanation, yet it is hoped that sufficient is given to lead all our thinking farmers to a full comprehension of this deeply important system, without which no farmer can possibly know his true condition. nor whether he is dealing justly with himself and his neighbors.

The following forms embrace the whole work done on a farm during one week, from the 11th to the 16th June, and the actual expense for the week is carried in to the diary, is charged to the separate objects and thence posted into the account book. At the end of the season, each account will show to the farmer its true condition, whether it be profitable or losing.

Time, expense, and occupation of persons employed on the Auchness Farm.—1849.

JUNE, 1849.								Rate pr day.	Rate pr mo.	Rate pr yr.	Cost for this week	Monday, June 11.	Tuesday, June 12.	Wednesday, June 13	Thursday, June 14	Friday, June 15.	Saturday, June 16
NAMES.	Mon.	Tu's.	W'd.	Th'r.	Fri.	Sat.	Total	Cents.	$	$							
J. Mahan,........	1	1	1	1	1	1	6	38.16	10 00	120	2 30	Mending road 'till 10 a. m. Weeding Barley.	Attending the Sheep-shearers.	Attending, marking, and trimming the sheep.	Mending the farm road.	Mending the road.	Hoeing corn.
J. Atkins,........	1	1	1	1	1	1	6	34.50	9 00	108	2 07	Weeding Barley.	Hoeing garden.	Hoeing garden.	Mending farm road.	Hoeing corn.	Hoeing corn.
A. Kirkwood,.....	1	1	1	1	1	1	6	30.67	8 00	96	1 84	Weeding Barley.	Attending the shearers.	Attending the sheep.	Mending farm road.	Hoeing corn.	Hoeing corn.
J. Gilbert,........	1	1	1	1	1	1	6	30.67	8 00	96	1 84	Weeding Barley.	Shearing sheep.	Shearing sheep.	Mending farm road.	Mending road.	Hoeing corn.
H. Ormond,......	.....	1	.....	.....	.....	.....	1	$1	......	......	1 00	....	Shearing sheep.				
J. Herbert,.......	.....	1	1	.....	.....	.....	2	$1	......	......	2 00	....	Shearing sheep.	Altering lambs, &c.			
L. Thompson,	1	1	1	1	1	½	5½	38.46	10 00	120	2 12	Preparing sheep pens, &c. &c.	Rolling wool.	Shearing and trimming hoofs.	Hoeing corn with horse hoe.	Hoeing corn with horse hoe.	Hoeing corn.
T. Thompson,....	1	½	½	1	½	1	5½	31.95	8 33	100	1 66	Preparing pens.	Rolling wool.	Rolling wool.	Choring.	Hoeing corn.	Hoeing corn.
						Days,..	37½				$14 83						
											Thermom.	52. 70. 62	56. 69. 65	56. 76. 60	70. 84. 74	70. 84. 74	60. 74. 64
											Barom. ..	29.6 .. 29.5	29.5 29.5	29.5 29.4	29.3 29.2	29.3 29.3	29.3 29.6
											Weather,	Clear.	Cloudy. Rain.	Hazy. Wind.	Hazy. Clear.	Cloudy. Rain.	Cloudy. Clear.

Diary—*Containing the entries of the farm business for one week.*

Charge	1.	Roads for repairs this week, as per time book,..	$2 30
	2.	Field No. 4—for weeding barley, as per time book, ...	1 15
	3.	Sheep—for preparing pens, for shearing, rolling the wool, altering lambs, and trimming hoofs,	7 25
	4.	Indian corn—for hoeing this week,..............	3 54
	5.	Garden—for hoeing this week,..................	60
		Correct as per time book,..........................	$14 83
Credit	20.	J. Mahan, for one week's work per time book,	$2 30
	25.	J. Atkins, " "	2 07
	30.	A. Kirkwood, " "	1 84
	35.	J. Gilbert, " "	1 84
	80.	Cash paid to shearers, (161 sheep,)	3 00
	40.	L. Thompson for 1 week's work per time book,	2 12
	50.	T. Thompson, " "	1 66
		As per time book,..................................	$14 83

80. Cash. *Dr.* to (3.) Sheep.
For 586 pounds of wool at 32 c. per lb.,... $187 52
85. Expenses. *Dr.* to (80.) Cash.
Paid this week for groceries, per bill,....$1 75
Paid for a plow point,........... 31
One shoe, set on horse "Bob,"......... 10
——— $2 16

The figures preceding the names of the several accounts refer to the page of the account book, where they will severally be found.

Account Book, or Leger—*Exhibiting the farm business for one week, distributed under the proper accounts.*

1849.	*Roads of the Farm.* folio 1.	
June 16.	Repairs,...	$2 30
1849.	*Field No. 4—Barley.* folio 2.	
June 16.	Weeding Barley,................................	$1 15
1849.	*Sheep Account—flock 161.* folio 3.	
June 16.	Shearing 161 sheep, rolling the wool, altering lambs, &c., &c.,................................	$7 25
	Cash received for 586 lbs. of wool, at 32 c.,.....	187 52
1849.	*Indian Corn.* folio 4.	
June 16.	Hoeing corn this week,.........................	$3 54
1849.	*Garden.* folio 5.	
June 16.	Hoeing this week,..............................	60
	John Mahan, folio 20.	
June 16.	For week's work,...............................	$2 30
	James Atkins, folio 25.	
June 16.	For week's work,...............................	2 07
	A. Kirkwood, folio 30.	
June 16.	For weeks' work,...............................	1 84
	John Gilbert, folio 35.	
June 16.	For week's work,.......	1 84
	L. Thompson, folio 40.	
June 16.	For week's work,...............................	2 12
	P. Thompson, folio 50.	
June 16.	For week's work,..........	1 66
1849.	*Cash Account.* folio 80.	
June 16.	Received for wool,............................	187 52
	Paid for sundries,............	2 16
	Paid sheep shearers,.........................	3 00
1849.	*Expense Account.* folio 85.	
June 16	Paid for Groceries, &c.,..........................	2 16

I fear, Messrs. Editors, that I have made an unreasonable demand upon your columns this month, but considering *Order* and *System* as the life of business, it cannot, perhaps, be too strongly urged or illustrated, and sincerely do I wish that my remarks might provoke some more powerful pen to place these cardinal virtues of the farmer in a stronger light. Agricola. *Seneca County.*

Premium Farm.

The New-York State Agricultural Society awarded the first premium for the best cultivated farm (1848) to Mr. H. T. E. Foster, Lakeland Farm, Seneca county. We take from the *Transactions* of the Society, Mr. F.'s statement in regard to the management of his farm as follows:

Soil and Situation.—Lakeland farm lies on the eastern shore of Seneca Lake, and consists of 230 acres, of which 200 are under cultivation, the remaining 30 being woodland. Sloping gradually to the lake shore, and undulatory in its character, the land has proved itself well adapted to the cultivation of both grain and the grasses.

The soil is a clayey loam, the subsoil being mostly a stiff clay, having a basis of slate rock, which in some parts of the farm, particularly near the lake shore, approximates the surface. Limestone boulders are occasionally found in different parts of the farm, but to no great extent.

The best method of improving the clay loam, of which my farm is composed, I have found to consist in deep plowing and ample manuring, care being taken to have those portions of the fields which needed it, thoroughly drained.

The usual depth of plowing is between six and seven inches, except when fall plowing is done; the furrow is then deepened, that a portion of the subsoil may be acted on by the frosts of winter. The soil being uniform in its character, it is out of my power to answer the remainder of the question relating to it.

I have made no particular experiments in reference to shallow and deep plowing.

The subsoil plow has not yet been introduced upon the farm.

The trees indigenous to the soil were red and white oak, hickory, hard and soft maple, black walnut, butternut, red elm, white and black ash, basswood, mulberry, wild cherry, crab apple, cucumber, aspen and thorn bush. The plants that were indigenous were, as far as I can ascertain, as follows: Ginseng, adder tongue, Adam and Eve, blood root, blackberry, strawberry, elecampane, cowslip, crowfoot, colt's foot, heal-all, pileworth, Solomon's seal, wild turnep, wild gooseberry, mountain mint, wild pea, mandrakes, &c.

MANURES.—Twenty loads of manure, (30 bushels to the load,) are usually applied per acre. On some portions of the land where a stiff clay predominates, 30 loads per acre have proved advantageous. The manure is allowed to accumulate in the yards until spring, when it is either applied in a green state, or drawn out and made into a heap, alternating the manure with layers of straw, care being taken to have a trench made at the lower end of the heap, to receive the drainage therefrom: this trench being replenished from time to time, with fresh straw.

The manure is made from the straw of the different grains raised on the farm. With this straw the sheep and cattle yards are kept constantly littered to a good depth, and it is freely used as bedding in the horse and cow stables, the manure thrown from these being frequently covered with straw, to prevent the action of the sun, and retain as much as possible of the ammonia escaping therefrom. The number of loads manufactured annually depends in a great measure on the quantity of straw produced, and also varying with the number of cattle wintered. The whole number of loads drawn from the yards this past season was 400, this number would have been much greater, had not a deficiency of sheep hay rendered necessary the feeding of straw to the sheep for a longer period than has usually been the practice. Hitherto all the manure has been applied the same year it was made.

The manure is used partially in a green, and partially in a fermented state. The land intended for corn and potatoes is always covered with green manure, the surplus is applied in a fermented state to the fallows and stubbles in the fall.

There is a bed of shell marl on the farm-lying at the depth of two feet from the surface, which having lately drained, I intend using in the manufacture of compost with my barn-yard manure. I know of no other way, by which my supply of manure could be cheaply increased.

I have used lime, plaster, bone dust and ashes. Six bushels of lime were mixed with four of ashes and two of plaster, and applied at this rate per acre to the potato field. The vines grew with remarkable luxuriance. The yield of potatoes, however, was not great, and the tubers were much affected by the rot, contrary to my expectation, as this compost was applied in the hope of preventing the disease. Plaster is always applied in the spring as a top-dressing for clover and for corn, at the rate of a bushel per acre, always with very marked benefit. The pasture fields also receive a dressing at the same rate. Bone dust has been applied to timothy meadows, at the rate of three bushels per acre, without any visible effect.

TILLAGE CROPS.—One hundred and twenty-two and a-half acres were under tillage this year, as follows:

55 acres of wheat sown last fall; 13 do barley; 14 do oats; 13 do Indian corn; ½ do potatoes; 27 do fallow, now sown with wheat.

I have, in addition, sown with wheat this fall, my oat and barley stubbles.

Two bushels of wheat are sown per acre in September. As but one field on the farm is infested with Canada thistles, or any other noxious weeds, which can be destroyed by fallowing, I have pursued the system of sowing my oat and barley stubbles, in preference to having as large a portion of my farm as is sown with wheat, lying in naked fallow. The crops raised by this method, have proved equal both in quality and quantity to those of my fallows; and as may be easily perceived, the profit is increased by the whole value of the summer crop. My method of stubbling is as follows: As soon as the oats and barley are removed, the land is plowed to a good depth, and immediately harrowed down. The stubble fields are allowed to remain in this state until the fallows are sown, thus giving an opportunity to whatever seeds or fallen grain may have remained on the ground to germinate. They are then cross-plowed, and the wheat sown and harrowed in. This year Ide's cultivator has been used in some of the fields to cover the seed, and from the appearance of the growing crop, successfully. It has been found that stubble fields prepared as has been stated, have been more free from pigeon weed, or red root, (with which most of the farms in this neighborhood are more or less infested,) than the fallows.

Part of my wheat was sown the past season on a clover ley, plowed to a good depth, the wheat sown on the furrow, and then harrowed in. The crop proved most excellent. It may be here remarked, that many farmers in this vicinity have practiced this method of sowing wheat on a clover ley, and with but few exceptions, successfully. The fields which are fallowed, are plowed three times, and thoroughly harrowed after each plowing. The usual time of sowing is from the 20th to the 30th of September. All the grain is cut before it is fully ripe. Hussey's reaping machine is employed in harvesting. Ten men are required to man this machine effectually, and twelve acres per day the usual amount cut, the machine being in operation about eight hours. By having two teams, and changing them every two hours, the number of acres cut, might, I have no doubt, be increased to sixteen per day. After remaining in shock till it is fully ripe, the wheat is carried to the barn where the threshing machine stands. The whole amount harvested from 55 acres, was 1,422 bushels, being at the rate of nearly 26 bushels per acre.

Barley is sown as early as possible in the spring, at the rate of two and a-half bushels per acre. The ground selected for this crop is usually that on which corn has grown the previous season. It is harvested in the same manner as the wheat. The average yield this season was 33 bushels per acre. The oats are usually sown on a clover sod, which has been used as a sheep pasture the previous year. The average yield per acre was 55 bushels. Both the oats and barley, as well as the wheat, exceeded the standard weight. It may be proper to state that the scythe and cradle were used in harvesting those portions of the oat and barley fields where the reaping machine could not be worked to advantage.

Indian corn is planted about the middle of May, in drills 3½ feet apart, Emery's seed planter being used. It is cultivated and hoed twice during the season. Part of the land being ill adapted for corn, the average yield this season is light, being at the rate of 55 bushels of ears per acre.

For the last four years, the potatoes have been affected with what is termed the rot, frequently decaying, although apparently sound when dug, before a month has passed. No remedy has been discovered. Early and late planting and harvesting have both been tried, but without success.

Grass Lands.—Clover and timothy are grown on this farm. Twelve pounds of clover seed, mixed with four quarts of timothy, are sown per acre in the spring, either upon the growing wheat or harrowed in with the barley. Those fields intended for timothy meadows are sown in the fall, with from eight to ten quarts of good seed per acre. Both the timothy and clover seed are sown by hand.

Thirty-five acres were mown this year, the average yield being about a ton and a-half per acre. The manner of making clover hay is as follows: The clover that is cut one day is allowed to remain in the swath till the following morning, when it is turned, and the same afternoon raked with the horse rake, and put into small cocks; the next morning, if the weather is fine, these cocks are opened, and the hay is then carried to the sheds. From four to six quarts of salt are allowed to every load. The time of cutting varies of course with the season, but is generally about the first of July. Timothy hay is cut when the bloom is past, but before it is fully ripe. It is allowed to remain in the swath over night. The following day it is turned, raked into windrows and drawn in, without having been drawn into cocks. Salt is also freely used with this hay.

All the mowing lands can be plowed.

I have not practiced irrigation, as there is no means for so doing.

There is no bog or low land on the farm.

Domestic Animals.—The stock at present on the farm is as follows: seven cows, six young cattle, and four calves, six horses and a yearling colt. The cows and young cattle are a cross of the native breed with the Durham.

I have hitherto made no experiments to test the value of different breeds.

The milch cows during the winter are housed in a building set apart for this purpose, each cow having her separate stall. They are allowed, however, the use of a yard adjoining the stable during part of each day. In this yard there is a trough which is always full of pure water. Morning and evening the cows are fed in the stalls, with corn-stalks and roots, as long as they last, while in the yard they are supplied with fresh straw, placed in racks. When the corn-stalks are all consumed, they are fed with hay. The young cattle are allowed to run in a barn yard, to which a warm shed for their shelter is attached, and are fed with corn stalks and straw till about the middle of February, when hay is substituted for the stalks. The corn stalks for the milch cows are usually cut with a cutting machine, moved by horse power. The young cattle have at all times access to water. The calves are kept in a yard by themselves, and in addition to hay, receive a feed of bran, or of corn and cob meal, daily. The cattle fed in this manner, keep in good condition and stand the winter well.

As most of the butter is consumed on the farm, no very accurate account has been kept of the quantity. There is nothing peculiar in the manner of making it. No cheese is made.

I have at the present time, 175 sheep. They are of the Merino breed, though not of pure blood. The average yield per fleece this season was 3½ pounds. Last year's clip brought 30 cents a pound. The wool of this year's shearing is still unsold. About three-quarters of the ewes have lambs, and usually about four-fifths of these are raised. The sheep will now command from $1.50 to $1.75 per head. The lambs can be sold for $1.

The sheep are wintered in large yards, with sufficient accommodations for shelter, and abundantly supplied with water. The ewes, wethers and lambs have each separate yards. The ewes and wethers are fed with straw, placed in suitable racks, with an occasional feed of bran, until about the first of February, when they receive in addition, a daily allowance of clover hay. The lambs are fed clover hay all through the winter, with a daily feed of oats or corn and cob meal. The past winter I lost but one sheep from the whole flock.

There are now on the farm 11 hogs, 2 breeding sows and 4 pigs, 15 in all. They are fed with fallen apples and the slop from the house until a month or six weeks before killing them, when they are fed as much corn as they will eat, in addition to the slop. They are killed when from 12 to 15 months old, and will average from 250 to 300 pounds when dressed. In the summer, the larger hogs are allowed to run in a clover lot.

No experiments have been made to test the value of different root crops. Turneps were once attempted, but without success. Half an acre of carrots are usually grown for the use of the milch cows, the land, however, being ill-adapted for roots, the yield is seldom large.

Fruit.—There is an orchard of three and a-half acres, in full bearing, containing 120 trees; and I have lately planted another acre with 66 trees. The trees are all grafted, and comprise the following varieties: Early Harvest, Sweet Bough, Fall Pippin, Jersey Sweeting, Baldwin, Spitzenberg, Bellflower, Tallman Sweet, Vandevere, Pearmain, Seek-No-Further, Swaar, Rhode Island Greening, Spice, Winter Pippin, Lady Apple, Northern Spy, and Newtown Pippin.

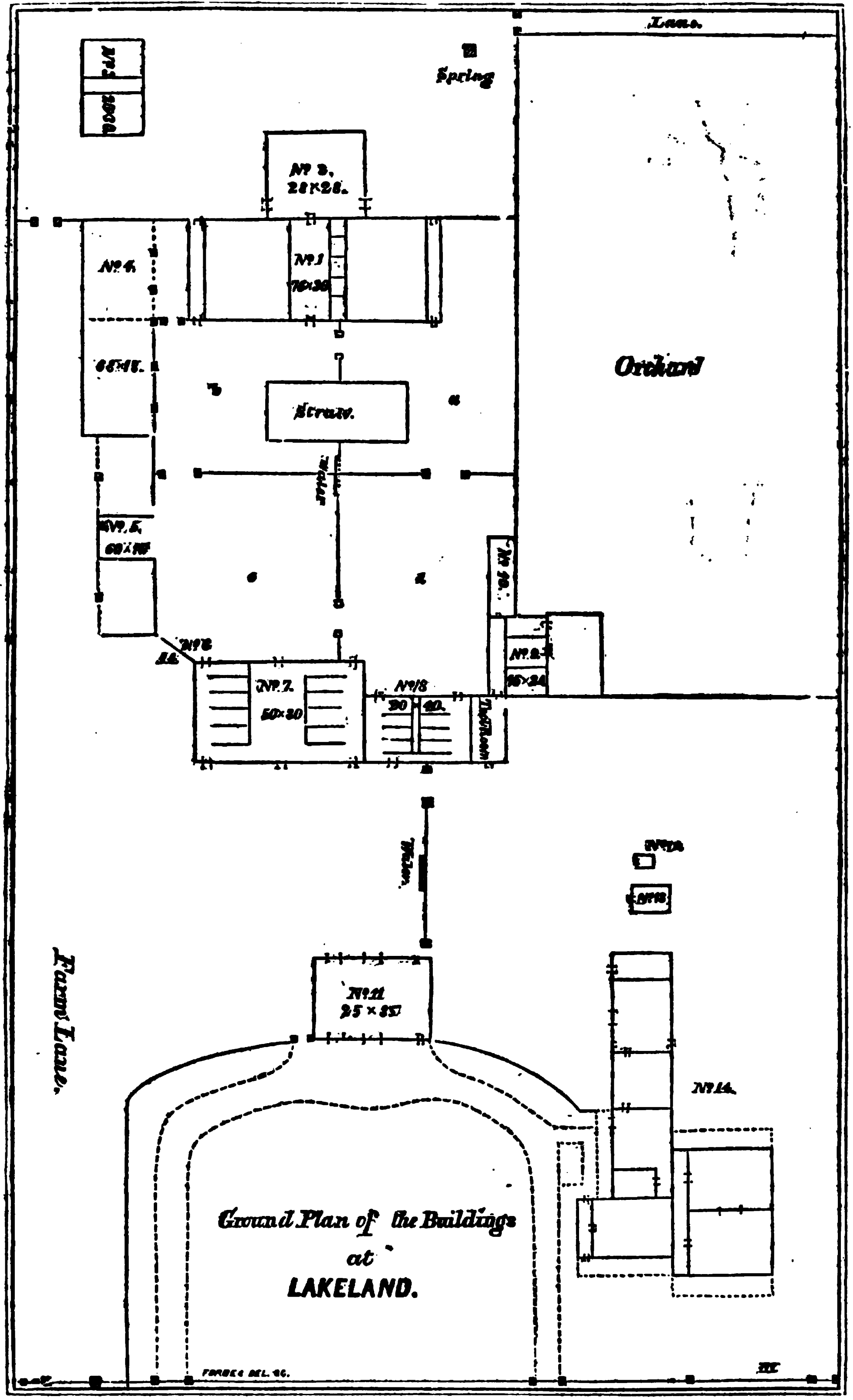
There is a pear orchard of two and a-half acres, lately planted, containing 178 trees of the following varieties: Madeleine, Bartlett, Bergamot, Virgalieu, Seckel, Duchesse d'Angouleme, Louise Bonne de Jersey, Passe Colmar, Winter Nelis, Glout Morceau, Beurre d'Aremberg, &c. The cherry and peach trees are mostly young. The varieties are, of cherries: Napoleon Bigarreau, Elton, Elk-horn, Black Tartarian, Yellow Spanish, Morello, &c.; of peaches, Early York, Early Slocum, Tillotson, Rareripe. There are some fine plums in bearing, and a large number of young trees of approved varieties.

The apple-borer has injured the apple trees to some extent. To prevent its further depredations, I this year caused each tree to be surrounded with clay subsoil to the height of about eighteen inches above the ground, and have noticed but few trees that have been attacked since this was done.

The young orchards are kept always under cultivation, the ground being planted with either corn or potatoes, and well manured. The old orchard is plowed once in three years, receiving a good dressing of manure; one crop taken from it and then seeded down to clover.

No experiments have been made, worthy of note.

Fences, Buildings, &c.—The farm buildings are arranged in the form of a square, enclosing the barn-yard, which, with the exception of a small portion on the



68—PLAN OF LAKELAND FARM.

southern side, is entirely surrounded. The barn-yard, for convenience, is divided into four parts; in the centre is a trough, which waters the farm-yards, and which is supplied from a never-failing spring, situated at a distance from the barn. The spring also furnishes an abundance of water for the house and garden. The situation of the respective buildings will be best understood by the annexed ground plan:

No. 1, is the grain-barn, 72 by 30 feet, with doors at each end, for driving in, but which can be filled with grain, when necessary, from the outside: a space of 16 feet is occupied as a granary, having bins on one side for the reception of different kinds of grain. The threshing machine and straw cutter stand on the floor above the granary, connected with the fanning-mill beneath, and both put in motion by the horse power, which occupies the ground floor of No. 2. The southern end of the barn is built on stone pillars, and is sufficiently high from the ground to afford an excellent shelter for a flock of sheep. No. 2. Building for the horse power; the upper part, which is open to the main barn, being used for grain. No. 3. A small grain-barn 30 feet by 20 feet. No. 4. A shed, the upper part of which is used for hay, and the lower part affording shelter to the cattle; opening to the barn-yard on the south. No. 5. Another shed; the upper part for hay, the lower part being subdivided into three parts, the central division opening on the barn-yard, and the others facing the lane, in which the farm wagons, sleighs, plows and other farm implements are housed. These divisions are of sufficient height to allow of the suspension of a hay-rigging above each wagon, and which can be lowered with facility when required for use. No. 6. Large double doors, connecting with the sheds and horse stable. No. 7. Horse stable, 50 feet by 30 feet, having stalls for ten horses, the space between the two rows of stalls being occupied as a feeding room, in which the hay and straw cutter stands. The upper part of the building is used for hay. The horse-stable is connected by a door with No. 8. The cow stables, with stalls for eight cows, each stall having a hay-rack, and a trough made of brick, for feeding roots, bran, &c. At one end of this same building is a room 12 ft. by 20 feet, which is used as a tool room, in which all the tools are placed at sight. Under this room is a warm though well-ventilated cellar for roots. All the upper part of this building is used for hay. No. 9. Hog-pen, with yards attached, the upper floor being used as a hen-house: No. 10. Corn crib: No. 11. Carriage house: No. 12. Ash house: No. 13. Ice house: No. 14. Dwelling house. The wood house, wash room, and the sleeping apartments for the men, being situated in a building which extends back in the rear of the wing: *a*. Sheep yard; *b*. Yard for young cattle; *c*. Sheep yard; *d*. Cow yard; *e*. Sheep yard.

The fences on this farm are of three kinds: Post and board, post and rail, and the common worm fence. The post and board fence, of which there is 505 rods, is built of oak posts and pine and hemlock boards, four and a-half feet high, with a top board and a batten to each post, at an expense of one dollar per rod. Of post and rail fence, there is 276 rods. The posts and rails are both taken from the farm, and at a fair valuation for timber, the expense per panel is about 50 cents. The worm fence is made either in the ordinary manner, or with upright stakes joined at the top with wire. Of this kind of fence there is about 1300 rods. The rails cost from ten to fifteen dollars per thousand.

All the farming operations are conducted with accuracy. All the crops are measured and the results carefully recorded. A journal is kept of each day's work, in which the labor performed by every man is written; and in a book kept for the purpose, is noted the number of days' work bestowed on each field, with the expense of labor, the product from the crop, and the profit from the same.

My books are kept in such a manner, that the expenses of the farm, and the income from it, can be seen at a glance, and an accurate balance of debt and credit can be made at any time. This system I consider not only necessary to an economical management of the farm, but highly satisfactory to the farmer, and will, in my opinion, amply repay him for the time and labor it requires.

The following statement of the expenses and profits of the wheat crop of this year, will serve as an illustration of the manner in which this branch of my accounts is kept.

Preparing of ground.—Men 77½ days, horses, (team) 77½ days,		$81 12
110 bushels seed wheat, at 9s.,		123 75
Harvesting.—Men, 92 days,	$62 87	
Team, 12 days,	9 00	
		71 87
Threshing and cleaning.—Men 62 days,	31 07	
Team 19 days,	14 25	
		45 32
Machine for threshing,		35 40
Board of men, 251½ days, at 25 cents,		62 87
Interest on value of land, 55 acres, at $75 per acre, equal to $4.125 at 7 per cent. is		288 75
Cost of cultivation, including interest,		$710 08
1,420 bushels cost $710.08, equal to 50c. per bushel.		
" " sold at $1 10¾,		$1,572 65
Less, cost, as above,		710 08
Nett profit,		$862 57

N. B. The cost of cultivation, exclusive of interest on value of land, is equal to 29¾ cents per bushel.

Similar statements could be given, of every crop raised, but the above will suffice.

I have thus answered to the best of my ability, all the questions proposed.

Farm Account—1848.

Dr.—To	labor account,	$628 43		
	House expenses,	313 25		
	Farm expenses,	973 20		
	Amount paid for taxes,	32 07		
	Amount paid for insurance,	75 00		
	Profit and loss account,	1,037 35		
				$3,059 30
Cr.—By	1,420 bushels wheat, at $1.10¾c.,	$1,572 65		
	410 bushels barley at 68 c.,	278 80		
	321 bushels corn, at 50 c.,	160 50		
	768 bushels oats, at 25 c.,	192 00		
	8½ bushels clover seed, at $4,	34 00		
	6 bushels timothy seed, at $2,	12 00		
	62 tons hay, at $5,	310 00		
	15 tons corn stalks, at $3,	45 00		
	24 bushels potatoes, at 25 c.,	6 00		
	75 bushels carrots, at 12½ c.,	9 37		
	30 bushels apples, at 63 c.,	18 90		
	11 hogs, average 230 lbs., at $4,	101 20		
	558 lbs. butter, at 12½ c,	69 75		
	499½ lbs. of wool, at 26 c.,	129 87		
	Eggs,	15 05		
	Pelts sold,	8 21		
	Fire wood,	20 00		
	10 sheep sold,	23 00		
	6 pigs sold,	3 00		
	Increase of stock			
By	36 lambs, at $1,		$36 00	
	4 pigs, at 50 c.,		2 00	
	4 calves at $3,		12 00	
		50 00		
				$3,059 30

In the account of house and farm expenses are embraced the amount of farm produce consumed, and the actual cash expenditure. H. T. E. Foster.

Plowing by Steam.—Some of the more recent experiments in England, in plowing by *steam*, have proved more successful than formerly, in consequence of using stationary engines at the extremities of the field. The engines are moved by a pair of horses. This mode would be well adapted for drained bogs, where the soil is often so soft, that teams cannot easily travel over it

Obituary.

Death of E. Phinney, Esq.

EDITORS OF THE CULTIVATOR—I last week learned the sad fact of the sudden decease of our most estimable and respected friend, E. PHINNEY, Esq., of Lexington, Mass. In contemplating this unexpected event, I have the compound feeling of deep pensiveness at the great loss the community has sustained, and of exultation on account of the lustre, the bright beneficence, shining forth from his virtuous and industrious life. I think it right that we should pause a little, to consider the great and important influences, radiating from the life and character of our lamented friend, and the secret springs of those influences. Particularly is it right that his example should be held up to the view of every farmer in the land,—for he had not a superior, in all we understand by the terms—a hospitable, highly educated, and yet eminently practical and successful farmer.

Mr. PHINNEY was born in the year 1780, in Nova Scotia, whither his father had temporarily removed, from the then province of Maine. The family soon removed from thence to Lexington, Mass., upon the farm that our friend afterwards cultivated, till his death. The youthful days of our friend, until the age of seventeen years, were spent upon this farm. He assisted his father in the various labors of husbandry, during the season of seed-time and harvest, and his winters were devoted to the prosecution of his studies, preparatory to entering college. In walking over this farm, a year ago, with our deceased friend, he related, with a smile, many of the rude ancient modes of agriculture, which, while a lad, he assisted his father in performing. Among others, he mentioned, as we came to the now beautiful reclaimed meadow, yielding the most luxuriant crops of the cultivated grasses and grain, that he had toiled many a day with his father up to his knees in mud and water, in carrying off, upon poles, the swamp hay from this meadow, to dry ground.

In the year 1797, he entered Harvard University, at which he graduated, with distinction, in 1801, at the age of twenty-one. Entering immediately after upon the study of law, he came early to the practice of his profession, at Thomaston, in Maine. He afterwards returned to Massachusetts, and attained a high reputation in a long and laborious career at the bar, in the county of Middlesex. In the year 1831, he was appointed the Clerk of the Courts in that county. The duties of the office he discharged for eighteen years, or until the time of his death, with the most patient industry and faithfulness, to the entire acceptance of the court and the community. Indeed, he may truly be said do have met death with his harness buckled on; for he was carried directly from his office to his residence and the couch where he died. But it is my intention to speak more particularly of Mr. Phinney, as a farmer.

Mr. Phinney commenced farming some twenty-five years ago. His farm had been carried on previous to that time, under the rude and improvident methods generally current in those days. The uplands were covered with stones and bushes, and the fields that had been plowed and cropped, were most thoroughly exhausted. The lowlands were either unreclaimed sour meadow, or wild impassable morass. He was persuaded, however, that from the contiguity of the farm to a large market, and the natural freeness and quickness of the soil, an investment might here be made in the removal of obstructions to cultivation, and the improvement of the soil, which, in the end, would be richly remunerative. It was no part of Mr. Phinney's nature to do things 'by the halves;' and his plans for improvement were upon a grand scale. All his prominent operations, however, were entered upon, and perfected with great judgment, and a strict regard to practical utility,—as results have proved. The total income of the farm not exceeding five hundred dollars per annum, for several years, reached nearly as many thousands before his death. His expenses, all the while, were very heavy, for his hospitality was unparalleled and unbounded. Hardly a week occurred, during the year, and at some seasons hardly a day in the week, but his family were entertaining visitors, attracted thither from all quarters of our country, to observe his modes of culture. It is believed that few men were as accomplished, in all that pertains to the gentleman and the hospitable host, as Mr. Phinney.

As a farmer, he brought to bear a most thorough investigation of the principles by which nature is governed in her operations. He never rested content with mere surface knowledge of scientific principles, nor with customs of husbandry, simply as such, but always was in the habit of looking into the interior merits of things. All his operations, in all stages, from the turning of the furrow, to the securing of harvests; from the breeding and rearing, to the full maturity of his agricultural animals, displayed the most thorough investigation of correct principles, by an enlightened and practical mind. I will but barely enumerate some of these operations, as the readers of *The Cultivator* have had an extended description of them in my former notices of his farming.

1. One of the first experiments made by Mr. Phinney, was the one by which he ascertained the amount of purely vegetable matter of the sward in an acre of grass land not yielding more than 500 lbs. of hay. The sward was carefully dug up on a portion of the field in the month of May, the roots and tops carefully separated from the dirt, and weighed; and it was found that an acre of sward land, of this description, contained twelve and a-quarter tons of vegetable matter. He therefore, commenced with, and always continued in, the practice of but one plowing for the whole rotation of crops following. By this means, the vegetable matter of the sod was turned under, there to remain, free from wasting influences by sun and wind, and, by its gradual decay, to keep the land light and permeable, and furnish nourishment to all the crops of that rotation.

2. The extensive manufacture, and correct application of peat and other composts.

3. The thorough under-draining of his bog-meadows and springy soils, thus bringing into profitable cultivation, land before without value.

4. The planting of extensive orchards, of valuable fruits, the rearing and training of the trees, showing the benefits of keeping the soil constanly open by cultivation, and of spreading out the tops or branches by the horizontal method of training, so as to admit the genial influences of light and heat in the perfecting and ripening of the fruit.

5. The scientific crossing, and the care and feeding, of improved breeds of cattle and swine.

However pressing professional duties might be, Mr. Phinney always found time to direct the various and daily business of the farm. To accomplish so much, it was his custom, during the fall and winter months, when his official duties were the most pressing, to rise by four o'clock in the morning, shave himself by the light of his fire, and then draw on a pair of stout boots, and with lantern in hand, sally forth to the barns and piggeries, to inquire into the condition of his numerous animals, and give the workmen the necessary directions for the business of the day. At six o'clock he took his breakfast, and immediately after started for the Court house, eleven miles distant, returning home at night. It was not unusual for him to repeat his visit to the barns in the evening. His friends sometimes remonstrated with him for returning home in very inclement weather; but he always replied, that this kind of exposure and activity fitted him the better for the discharge of official duties, and would never hurt him.

Mr. Phinney was constantly receiving letters from all quarters, making inquiries upon various subjects pertaining to farming, the answers to which would sometimes extend through several sheets of paper. Yet, owing to his love for, and his desire to promote agriculture, together with his perfect system, and untiring industry, he would always take pleasure in *finding* time, by some means or another, (often by sitting up till past midnight,) to answer those inquiries. It is a matter of regret to his friends now, however, that more of his spare or *stolen* time, could not have been devoted to a more public communication of his vast stores of knowledge, through the agricultural Journals, thereby benefiting a far greater number.

As a practical writer upon farming, no man in our country held a higher rank than Mr Phinney. His communications to the *New England Farmer*, and other papers, upon the various modes of culture he had adopted, detail every important particular with the greatest precision and minuteness, and evince the soundest discrimination, the profoundest investigation of correct principle. I here give a few extracts from his published writings, to show his ability in this way. The first quotation indicates the ardor of his mind in his agricultural pursuits:—

"The first sod that was turned, was one of the first decided steps from a savage to a civilized life, and in proportion to his advancement in agriculture and the arts of husbandry, man has, in all ages, receded from barbarism. Compare, for a moment, the miserable condition of the houseless, roaming savage of the forest, clad in the skins of beasts, furious and ungoverned as himself, depending for his subsistence upon the uncertain fruits of the chase, or the spontaneous productions of the earth, with the substantial permanent comforts of the industrious, intelligent and virtuous farmer;—and will not the contrast reconcile the cultivator of the soil, to a cheerful obedience of the divine command, to 'eat his bread in the sweat of his brow?'

"I shall not attempt a labored account of the progress of agriculture, from the earliest ages to the present day. It is enough that we find the opulent, the powerful and the learned of modern, as well as ancient days, devoting their wealth, their influence and their talents, to the advancement of the interests of agriculture. Who, then, is so regardless of the utility, the honor, or the pleasure of cultivating the soil, as not to aspire to the honorable appellation of Farmer? Who does not wish to withdraw from the anxious cares and uncertain pleasures of merchandize, and the perplexing duties of public or professional life, to repose on the tranquil bosom of rural retirement, and taste the pleasures, as well as partake in the labors of rustic life?"

The following extract shows the difficulties to be encountered, and the obstacles to be overcome in cultivating the stern soils of Middlesex county, among the hardest of which was his own farm, in its natural state:

"The deep intervales and alluvial tracts, which abound in some parts of our country, where almost the whole labor of husbandry consists in sowing and reaping, and no farther skill of the farmer is required than to know seed time and harvest, are not to be found in Middlesex. The broken and rugged surface of our farms, made up of hills and valleys of the roughest materials, requires great labor as well as skill to subdue its stubborn qualities, to preserve its natural strength, or to restore its wasted energies. This, while it increases the labor of the husbandman, at the same time gives him health of body and vigor for action, while he is happily exempted from the many evils which attend the cultivator of a more fertile region. This very rough and comparatively barren quality of our soil, though it may sometimes yield but a stinted harvest, and oblige the farmer to rise early, go late to rest, and eat the bread of carefulness, has nevertheless proved an independent, virtuous and happy community of farmers, whose unyielding patriotism and noble deeds of daring have enrolled the yeomanry of Middlesex among the boldest defenders of Grecian or Roman liberties."

Mr. Phinney was among that better class of farmers,—happily, a rapidly increasing class,—who disdain not to draw information touching their profession from books. All his practices were the result of a careful investigation of theoretical principles, derived from extensive agricultural reading, united with the closest and most minute personal observation in the field. One blow of his vigorous pen, demolishes the whole tribe of clamorers against 'Book-farming.' Hear him:—

"Books, I am aware, are a most distrustful source of information among many of my agricultural brethren. This ought not so to be. While the professors and friends of all the other arts and sciences, call to their aid the light and accumulated *written* wisdom of the past and present ages, why should the art of cultivating the earth, by far the most important of all the arts, be allowed no other guide than blind tradition?"

Every attentive observer of the actual condition and prospects of farmers around him, sees, that those tillers of the soil who read, observe and think, who make the laws of nature their study, and who appropriate to their own advantage every valuable suggestion of science, are fast distancing their more drudging neighbors, who are bound by the grappling, *withering* power of ignorance and prejudice. Mr. Phinney's remarks are much to the point on this subject:—

"It is true, that the wealth of the opulent has done much, but mental research and a spirit of inquiry, accompanied by the personal inspection and persevering efforts of the practical farmer have done much more, to increase the produce, and improve the condition of our farms. This is most forcibly illustrated by Pliny the elder:—

"'Furius Cresinus, an emancipated Roman slave, having obtained from his very small estate, much larger crops than his more wealthy neighbors from their vast domains, they became so envious that they charged him with employing enchantment to attract into his grounds the produce of their fields. Having been summoned by Spurius Albinus, and being fearful of condemnation, he introduced into the forum, as the tribes prepared to vote, his robust and well clad family, and his agricultural implements, his heavy mattocks, his ingeniously constructed plows, and his well fed oxen, and then exclaimed—Behold! Roman Citizens, my magic; but I am still unable to show you, or bring into the market place, my *studies*, my constant *vigilance*, my fatiguing labors. Scarcely had he concluded, when he was absolved by public acclamation.'

"It is in enterprise, *study*, *unremitting study*, vigilance and industry, that the mystery of great crops and successful husbandry consists."

It is the glory of our country that we have, scattered along everywhere among its private citizens, individuals,—unknown, perhaps, beyond the limited sphere of a district,—who are competent, both by native endowments and personal attainments, to fill the great and responsible trusts of State. All that shall be wanting is some fitting circumstance to draw the individuals out, and familiarize them with the *details* pertaining to these trusts. We may specify a little. It is the glory of our country, and it will tell, too, upon its future prosperity, that we now have individuals scattered along *in the agricultural profession*, who fully answer this description.

Among these, we may regard our lamented friend, Mr. Phinney, as an eminent example. Fitted for the highest walks of civilised life, he yet found ample scope for the successful employment of his talents and acquirements, in the peaceful and noiseless pursuits of agriculture. And so it ought to be. It is of the first importance to successful farming on the part of the individual, and, hence, to a prosperous agriculture, with its long train of attendant blessings, on the part of the State, that our farmers, generally, should be men of thought and observation,—men of mental culture. The farmer has to do with the great and mysterious operations and principles of nature; all his various steps or processes of cultivation, are closely connected with those principles, and his success, in a high sense, is absolutely dependant upon a knowledge and close observation of them. He finds, that in the cultivation of the earth, there are undiscovered principles enough, to engage the utmost efforts of Science to develope, mysteries enough, to task the most highly cultivated, the most specially endowed mind to unravel.

"The scenes of nature lie open to our view; they solicit our senses, and are adapted to impress themselves in a most lively manner upon our minds. Still, the mysteries of nature, with regard to the *essences* of things, and indeed to a multitude of subtle operations, are kept in a kind of sacred reserve, and elude the utmost efforts of philosophy to *surprise them in their concealments* and bring them to light. While Science goes on from step to step, in the march of her discoveries, it seems as if her grandest result was the conviction how much remains undiscovered; and while nations in a ruder state of science have been ready to repose on their ignorance and error, or to confound familiarity with knowledge, the most enlightened of men have always been the first to perceive and acknowledge the remaining obscurity which hung around them; just as, in the night, the further a light extends, the wider the surrounding sphere of darkness appears. Those that have devoted themselves to an investigation of the laws of nature, find, in a great variety of the most common productions, sufficient to engage their inquiries and employ their faculties: they perceive that the meanest work of God is inexhaustible;—contains secrets which the wisdom of man has not been able to penetrate. They are only some of the superficial appearances and sensible properties with which we are familiar. Substances and essences we cannot reach. The secret laws which regulate the operations of nature, we cannot unveil. Thus, one of the best effects of intellectual cultivativation, and the acquisition of knowledge, is to restore the mind to that state of natural simplicity and surprise in which everything above, beneath, and around us, appears replete with mystery, and excites those emotions of freshness and astonishment, with which the scenes of nature are contemplated during the season of childhood."[*]

In the year 1837, Mr. Phinney was chosen one of the Trustees of the 'Massachusetts Society for Promoting Agriculture.' This office he held till the time of his death. The various masterly reports of this Society, during this time, were from Mr. Phinney's pen; and it is but fair to presume that the suggestions put forth by him in this capacity, have had much to do in moulding and perfecting the improved modes of culture, now so common in the State. Among other things, it may be stated that the present improved form and light draught of the subsoil plow, as compared with the heavy, cumbrous implements of the kind that were first introduced among us from Europe, may be attributed to the investigations and suggestions of Mr. Phinney. His mind was *always* open to improvements. Although, as before stated, his large and important operations were entered upon and conducted with a strict regard to practical utility and profit, yet, so great was his love for Science, in its application to Agriculture, that he would try, upon a small scale, any experiment, suggested from a respectable source, which seemed to lean towards the development of important principles.

But our friend has set sail upon that vast ocean to the shore of which we, too, are so rapidly tending. His long life, so closely compacted with usefulness to the community, was closed, by a short and severe inflammatory illness, at his residence in Lexington, on the 24th of July last. He had attained his seventieth year, without ever before experiencing any severe sickness. The amiable and interesting family have met with a loss that can never be repaired; but while sorrowing over their bereavement, may a reflection upon his kind and fatherly deportment while among them, the high and noble deeds of his life, and the important influences which they are calculated to impart to Society, cheer them in *their* path of life, and, like him, may they fulfil the course allotted to them by like deeds of beneficence.

The public generally, and the agricultural community particularly, have also experienced a great loss, in the death of one so distinguished for the busy occupation of both pen and hand, in every way that could promote the interests of society. Though dead, yet does our friend, by his illustrious example, emphatically remind us to be up and doing, "while it is called to-day;" to seek the enlightenment and elevation of our fellows, in distinction from a total engrossment in *merely* selfish and paltry pursuits.

> "So live, that when thy summons comes to join
> The innumerable caravan, that moves
> To that mysterious realm, where each shall take
> His chamber in the silent halls of death,
> Thou go not, like the quarry-slave at night,
> Scourged to his dungeon, but sustained and soothed
> By an unfaltering trust, approach thy grave,
> Like one who wraps the drapery of his couch
> About him, and lies down to pleasant dreams"

Brattleboro', Vt., August 15, 1849. F. HOLBROOK.

The Veterinary Department.

Inflammatory Fever.

EDS. CULTIVATOR—My attention having been attracted by several communications in your useful joural, on the diseases of animals, I am induced to offer a few remarks on one of the most fatal diseases of cattle, which may be properly called "sanguineous congestion." or "inflammatory fever."

The primary source of this disease, in my opinion, lies in the too sudden changes from scarcity to rich pastures. Plants vegetating in a warm dry atmosphere, and those growing on elevated lands, contain much nutritive matter; on the contrary, when plants grow luxuriantly or in wet situations, they are not very nutritious. No one can doubt that nutritious food makes rich blood, and if cattle are allowed to eat, *ad libitum*, grasses of good quality, can we wonder that an abundance of blood should be formed which pre-disposes the animal to sanguineous congestion. Other causes may unite themselves with this excess of food, as want of exercise, great dryness of the air with excessive heat These, by taking away the serous (watery) parts of the blood by the skin and lungs, are all causes which have a tendency to induce congestion.

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[*] Rev. Robert Hall.

It is an error to suppose that the fat animal alone can die of plethora; for there is equal if not greater danger with regard to all cattle which make blood rapidly, if the food is nutritious or too rapidly changed when they are in common store condition, than when they are oppressed with fatness. This disease seldom appears in "house-fed" or lean stock; but those feeding or growing most rapidly are its first victims.

In this disease, congestion may be general or partial; if general, it will be principally confined to the brain, the lungs, or the bowels. The animal in such cases all at once ceases to eat; pauses; appears as if stunned; poises itself upon its tottering legs; the flanks heave rapidly; the eyes are no longer sensible to light; the nose is protruded; it foams at the mouth; frequently totters, stumbles and falls; lastly, a gurgling noise is heard in its throat, and it dies in dreadful convulsions. But when congestion is partial, the disease is less rapid in its course; the animal is dull, depressed, ceases to ruminate; limps first with one leg, then with another; large tumors appear in various parts of the body, which rapidly extend by infiltration over the body; the constituents of the blood separate, and decomposition soon begins in the affected tissues. In some cases the animal dies in less than an hour; others survive several hours, and in a few cases, two or three days pass before the disease arrives at a crisis. In most of these latter cases, the animal recovers.

The treatment of these diseases, in order to be successful, must be conducted with strict reference not only to the stage, but the complications of each case must receive our best attentions. The propriety of having recourse to blood-letting, will be best indicated by the character and number of the pulse. If its tone is weak, accompanied with great depression and rapid loss of strength, the ears and legs being cold, bleeding will not only be useless, but highly destructive; the animal is in a state of collapse, and the most active stimulants, as the carbonate of ammonia, spirits of nitric or sulphuric ether, spirits of turpentine, ginger, &c., with warm clothing and frictions to the cold parts of the body.

Bleeding should only be adopted either as a preventive, or at the very commencement of general congestion. It may then be followed by full doses of epsom salts with ginger. I would advise all breeders, on their losing one animal by this malady, to carefully examine their stock, and on observing any symptom of *indisposition*, to lose no time, but meet it by bleeding, physic, and short feed. ARTH. S. COPEMAN. *Utica, N. Y. July*, 1849.

Docking Lambs.

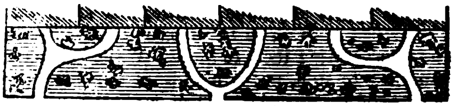
EDS. CULTIVATOR—Under the head of the Veterinary Department, the June number of The Cultivator, I find an article by O. F. M., of Wheeler, Steuben county. He gives his method of docking lambs. He says he takes the tail in his left hand, and holds it out straight, and, with a good shoe knife, cuts it off "as close as suits fancy." He says he finds this method quicker and better than a chisel and block. From my own experience, I think this is the very worst plan that could be adopted. It not only takes much longer to heal, but must be much more painful. Any person who has had any experience in this matter, knows that by pulling the tail hard enough to hold it out straight, and cutting it off with a knife in the manner he describes, will stretch the skin on the tail so much that when it is cut off, it will draw back and leave part of the bone bare; which will make a bad sore, exposed in such a manner that it will cause the little *innocent* much unnecessary suffering. Whereas by placing the tail on a block and drawing the skin close up on the tail, and with a mallet and chisel it is struck off at a blow. Then the skin shoves over the end of the bone, which not only protects the bone but is much sooner healed. A FRIEND OF HUMANITY. *Sullivan Co., N. Y., June 18th*, 1849.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Trees in Cities.

In closely built towns and cities, nothing is more repulsive to the eye, than long ranges of bare blocks occupied as dwellings, standing directly on the street, with none of the glare of reflection softened by the foliage of trees. Many of the better streets in some of our cities have, however, been exceedingly improved in this particular, by a narrow enclosed strip a few feet wide, protected by iron railing in front. A still greater improvement, but rarely adopted, is to build a row of dwellings at a greater distance from the boundary of the street, so as to leave a strip of lawn from twelve to thirty feet in width, to be planted with trees, and kept in the best manner. The accompanying figure represents a row of six houses thus situated. By this arrangement, all of them enjoy separately to a considerable degree, the view of the whole piece of ground; and whatever diminution in the space of the rear may become necessary, would thus be more than compensated by the improvement of the front. As a matter of pecuniary profit, the yearly value of such dwellings would doubtless be much greater in consequence of the slight increased expense of preparing and planting the grounds.



69—TREES IN CITIES.

Raspberries.

The Red Antwerp, and its kindred varieties, the Franconia and Fastolff, do not always succeed on light soils. Indeed it often happens, when the season is very dry, that they do not attain one-third their full size, and inexperienced cultivators are much disappointed, after having heard high recommendations of these celebrated sorts. The difficulty with light soils may be removed in a large degree by deepening the soil, and by a copious application of manure. Such soils should be dug not less than two feet deep, and even a greater depth would be better. Treated in this way, a strong loamy soil will give uniformly fine crops. But where the soil is a quite dry gravel, it may be difficult even, by trenching, to adapt it to the successful growth of the Red Antwerp. The substitution of the American Black Raspberry will be found in such instances a decided advantage. During the late severely dry weather, the latter variety on dry gravel, was observed to be very slightly affected, while some other sorts were rendered wholly unproductive. Although not of large size, the Black Raspberry possesses an unusually high flavor, and a decided improvement is made by enriching cultivation.

Spurious sorts are sometimes introduced in mixture with those which are genuine, by the dropping of the seed, and the production of new varieties on the same ground—which is to be prevented by picking the fruit clean, or by a careful removal of the new seedlings before they have attained much size.

Strawberries for Market.

The following interesting statement of the actual productiveness of some celebrated sorts of strawberry, we copy from the *Genesee Farmer*. This information is the more valuable, as giving the result of a large experiment in a region where the strawberry culture has not as yet been very extensively adopted, and with all the accuracy of real measurement:

"Messrs. BISSELL, HOOKER & SLOANE have also supplied the market largely. In a little over 2 weeks they have sold about two hundred bushels of fruit, notwithstanding the cautions of the 'Board of Health.' Their varieties for marketing were *Hovey's Seedling, Crimson Cone, and Large Early Scarlet*—the latter being their standard sort, according to their experience, by far the most profitable. From a bed measuring 119 rods of ground, they have picked upwards of 109 bushels of this fruit."

NEW SEEDLINGS.—The same paper contains descriptions of 22 new varieties of the strawberry, raised by ELWANGER & BARRY, of Rochester, and selected from about one thousand new seedlings, mostly crosses between Hovey's Seedling and Large Early Scarlet. These descriptions are given in a report of the Fruit Committee of the Genesee Valley Horticultural Society. Having had an opportunity of examining these new seedlings when in full bearing, the writer can add his testimony to their fine quality and extraordinary productiveness. They have now borne two years. New varieties, it is true, are to be received with great caution, but we cannot but believe that some of these may, at least for this latitude, prove eminently valuable. We copy the following descriptions from the report of the committee:—

5. Pistillate, a very large fruit, color a light scarlet, with dark seeds, shape mostly round, very juicy, immense bearer, (108 berries were counted on one root) a first rate berry, thought by some of the committee, the best of the lot.

6. Pistillate, regulary round shaped, much like the last, thought as good a bearer, and as juicy, but not quite so fine flavored.

9. Pistillate, a great bearer, juicy and high-flavored, a deep, bright, glossy scarlet, an excellent table fruit.

11. Pistillate, medium size, very dark scarlet, very juicy, high and somewhat musky flavor, good table fruit, medium bearer.

14. Pistillate, a great bearer, short-necked, high-flavored, very juicy, size above medium, thought the best of all the varieties.

16. Pistillate, flavor much like No. 14.

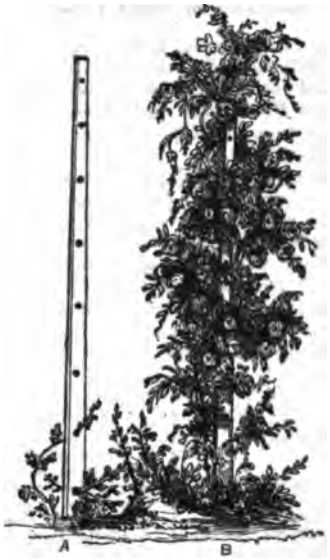
22. Color a beautiful orange scarlet, an excellent table fruit, being tart, very large, and a very good bearer, and valuable for its lateness.

To the report of the committee, P. BARRY, Hort. Editor of the Farmer, appends the following remarks:

From the above collection, Messrs. ELWANGER & BARRY have selected five sorts, which they consider eminently worthy of cultivation, combining large size, fair quality, with extraordinary productiveness.

They have borne for two years, beside the best known varieties, and under the same conditions, and have, so far, surpassed them all in productiveness. They cannot say how they may succeed in other localities, but here Messrs. E. & B. feel confident they will prove valuable.

The following are the names of varieties chosen:—No. 6, Monroe Scarlet; 11, New Necked Pine; 16, Climax Scarlet, 22, Orange Prolific.



Rose Pillars.

We published a few months since, the description of a mode of supporting climbing plants, on the trunk of a cedar tree, armed with short side branches from bottom to top. We give, in the above figure, another mode of effecting the same object in a more simple manner, which may be advantageously adopted where the cedar supports cannot be obtained, and which, if of durable wood, will last a long time. It is not, however, suited to the more delicate climbers, as these would hardly assume a sufficient breadth of growth; but for roses, bignonias, and the more rampant growers, it is admirably adapted.

It is made of a piece of scantling, set upright like a post, in the earth, and pierced with holes at a distance of about a foot from each other. Through these holes the growing shoots are inserted as they advance upwards in growth, running them in opposite directions through the same hole, and at the same time occasionally twining them around the post, so as to conceal its surface. This mode of support has for some years been adopted by David Thomas, of Aurora, Cayuga county, and from a specimen upon his grounds, the above figure was drawn. The double Prairie, or Michigan roses, the Boursalts, and the taller growing hybrid China roses, are well adapted to these sorts of pillars, and the intermingling of the various shades of color, produces a very pleasing appearance.

The Seckel Pear.

This variety of the pear possesses more than ordinary interest for several reasons. Usually, it is remarkable for withstanding the blight. It is the highest flavored pear known. And so uniform is its excellence in all localities, that the fruit committee of the American Congress of Fruit Growers, *unanimously* pronounced it worthy of general cultivation, a compliment which no other of the thousand pears, except the Bartlett, received. It holds about the same rank with pears, as the Green Gage with plums.

The original tree still stands on the banks of the Delaware, three and a-half miles below Philadelphia. According to Dr. Brincklé, it is about thirty feet high, two feet in diameter within a foot of the ground, and sixteen inches, higher up. It stands in a pasture without protection, and the trunk is hollow and decayed on one side.

Selection of Good Fruits.

We extract the following interesting remarks on fruit culture and selection of varieties, by that experienced New-England cultivator, Samuel Walker, Esq., of Roxbury, now President of the Massachusetts Horticultural Society, from the Report of the American Institute.—*Horticulturist.*

In submitting the following list of the best American varieties of apples, pears, and plums in juxtaposition with the best European varieties, it is not my intention to make any invidious comparison; on trial,—the truth, the whole truth, will be amply sufficient for any purpose. I shall, therefore, leave the result in the hands of the best judges—the cultivators—simply stating that I shall select the best varieties from the catalogues of the New and the Old World.

Apples.

American Varieties.	*European Varieties.*
1 Early Harvest,	1. Early Red Margaret,
2. Williams' Apple,	2. Red Astrachan,
3. Benoni,	3. Sops of Wine,
4. Porter,	4 Gravenstein,
5. Pomme de Neige,	5. Ross Nonpareil,
6. Baldwin,	6 Dutch Mignonne
7. Yellow Belle Fleur.	7. Cornish Gilliflower,
8. Newtown Pippin, (green)	8. Ribston Pippin,
9. Rhode Island Greening,	9. Herefordshire Pearmain,
10. American Golden Russet.	10. English Golden Russet.

I will not carry out the comparisons further, but submit a list of American varieties, all of which are deserving of extensive cultivation, viz:

Large Yellow Bough, Chandler, Fall Harvey, Jonathan, Minister, Hubbardston Nonsuch, Rambo, River, St. Lawrence, (Corse's,) Northern Spy, Esopus Spitzenburgh, Summer Queen, and Ladies' Sweeting.

Pears.

American Varieties	*European Varieties.*
1. Bloodgood,	1. Citron des Carmes,
2. Dearborn's Seedling,	2. Passans du Portugal,
3. Pratt,	3. Williams' Bonchretien,
4. Knight's Seedling,	4. Flemish Beauty,
5. Tyson,	5. Rostiezer,
6. Seckel,	6. Fondante d'Automne,
7. Cushing,	7. Bezi de la Motte,
8. Heathcot,	8. Doyenne Blanc,
9. Andrews,	9. Louise Bonne de Jersey,
10. Buffum,	10. Doyenne Gris,
11. Dix,	11. Beurre Diel,
12. Lawrence,	12. Duchesse d'Angouleme,
13. Columbia.	13. Glout Morceau.

In addition to the above, I will add a list of European varieties of great merit, viz:

Beurre d'Aremberg, Beurre d'Anjou, Beurre Bosc, Eyewood, Henry IV, Van Mons Leon Le Clerc, Marie Louise, Winter Nelis, Paradise d'Automne, Passe Colmar, St. Ghislain, Vicar of Winkfield. Urbaniste, and Echasserie. For baking, Belmont, Black Worcester, Catillac, and Uvedale's St. Germain.

Plums.

American Varieties.	*European Varieties.*
1. Jefferson,	1. Green Gage,
2. Columbia,	2. Purple Gage,
3. Washington.	3. Coe's Golden Drop.

To this lot of plums, I will add the following American varieties as worthy of a place in every good collection, viz:

Purple Favorite, Huling's Superb, Imperial Gage, Lawrence Favorite, Bleecker's Gage, and Bingham.

Cherries.—The best varieties of American and European cherries are very dissimilar. I shall therefore submit a list of such varieties as I consider of the best quality, viz:

American varieties.—Sparhawk's Honey, Downer's Late, Sweet Montmorency, Manning's Mottled, Downing's Red Cheek.

European varieties.—Black Eagle, Black Heart, Black Tartarian, Downton, Knight's Early Black, Bigarreau, Bigarreau Holland, Elton, Florence, Belle de Choisy, May Duke, and the Late Duke.

By the foregoing statement it will be perceived that among the well established apples and plums in this country, a majority are the product of America. Of pears and cherries, the greater number have been imported from Europe.

I will now proceed to the second part of my subject, and notwithstanding my esteemed friend, Thomas Bridgman, Esq., has with ability and good judgment, brought the subject of seedlings under the notice of the managers, yet I shall not refrain to state all I intended to do before I received Mr. Bridgman's able report.

I am aware when a word of caution is to be spoken, or an error pointed out, that it should be done with candor and kindness; in that spirit the following remarks are submitted:

Seedling Fruits.—My object is to point out an error, may I not rather say, a weakness, on the part of some cultivators of fruits, to overrate their own productions, more especially so when they raise a seedling apple, pear, plum, peach or cherry, having any pretension to merit. If their production is of the best quality, and possesses but a single point of superiority, say only a shade of color, or a slight increase of size, in addition to the good qualities of the most choice variety of that class of fruit in the present catalogues, that alone will commend it to other persons, and they will mete out its praise in due season.

No seedling should be recommended for extensive cultivation until it shall have been proved to be *superior in some respects* to the variety it most resembles. For instance, if any person shall raise a seedling plum one-fourth larger, and equal or superior in flavor, more beautiful in its appearance, and more productive than the Green Gage, then the new variety would soon find its way into every good collection of plums. The same remarks will apply to the Newtown Pippin apple. The person who shall be so fortunate as to raise a seedling apple of equal flavor, better color, and a tree more thrifty and productive than the green Newtown Pippin, will have accomplished something *worthy of record and a name.* But cultivators, like young fond mothers, are apt to consider their production to be a "non-such;" time, alas! often convinces them of their mistake; and when too late, they find they have only deceived themselves.

Raising Fruit in Russia.

In the intensely cold climate of St. Petersburg, where nearly all our common fruit trees perish under ordinary circumstances, fine crops of apples, plums, and cherries have been obtained, by training the branches on a trellis only about a foot from the ground. The heavy snows entirely cover them, and completely protect them. Large crops of apples have thus been obtained for successive years, even after winters which have destroyed other trees when double matted. The Green Gage and Orleans plum have ripened before mid-autumn. Morello cherries have borne good crops. When the fruit ripens, it does not bruise in falling.

Mulching.

This excellent mode of treating newly transplanted trees, has been found eminently beneficial during the present very dry summer. A row of young apple trees had been set on a piece of ground, where cultivation could not easily be given. In the early part of summer, they entirely ceased growing, and on a large portion the foliage began to assume a yellow appearance, and their loss was strongly apprehended. Coarse litter was then applied to them, to a depth of several inches and extending some feet about them. So beneficial has been the result, in retaining the moisture of the soil, that although several weeks have elapsed since with scarcely a single shower during this whole period, that they nearly all have commenced re-growing, and the leaves have regained the usual green color.

Planting Strawberries.

As a general rule, the spring of the year has been found much the best season for planting out beds of the strawberry. But it often becomes necessary to perform the operation during summer, or early in autumn. If, at this season, the weather should prove quite dry, a regular and abundant watering for several days does not always prevent the loss of a considerable portion of the plants. To obviate this difficulty, the writer has adopted the following very simple treatment. which has been quite successful even at midsummer, and in the midst of the recent extraordinary drouth. Nearly all the leaves are pinched off from the plants, except the central and half developed ones; the roots are dipped in a vessel of soft mud, giving them a thick coating; when set out, the earth is well settled about them by means of a copious watering; and then about two inches of rotted manure spread upon the surface. This will keep the soil sufficiently moist with one daily watering, if the weather be very dry, and much less frequently if it be moist.

Rawle's Jannett.

Having noticed a great many communications recently, about the Rawle's Jannett apple, I will mention a fact that may be of benefit to the growers of that superior fruit. A friend who has a large orchard of this apple, has ten trees upon one corner of the orchard which always produce fruit a third larger, and the flavor so much superior, that it was supposed by all who saw and ate the apple, that they were a superior variety of the Jannett. This spring I examined the soil, and found that a vein of iron ore passed just under the ten trees, so near the surface that it had been plowed and worked up with the top soil. A variety of the large Blue plum growing upon the same ground, is also very fine; while grafts taken from the same plum trees and worked upon stocks grown on different soil, proves worthless. H. R. Robey. *Hopewell Nurseries, near Fredericksburg, Va.*

Aphides and Ants.

Eds. Cultivator—Having transplanted during the past winter, an orchard of the most select varieties of fruit trees, I discover that at the present time they are infested by thousands of small red and black ants. Already they have completely destroyed an ornamental yard tree, (the Magnolia glauca,) whether by their own depredations, or that of the aphides conveyed thither by them, I am at a loss to determine. Fearing that the same effect will be produced on the trees above noticed, and having tried all the remedies mentioned in various vols. of *The Cultivator*, as well as those obtained from acquaintances, without success; such as the application of lime and ashes to the roots, soot to the leaves, and tar around the trunks, I would respectfully request that you, or any of your numerous contributors who may be in possession of a remedy for this evil, will make it public.

I find that while the apple, pear and plum are comparatively free from ants, the cherry, apricot, nectarine and peach, (particularly the last) are peculiarly liable to their attacks. Thomas C. Hines. *Nansemond, Va., June* 24, 1849.

We are not aware that fruit trees are injured by ants, neither have we known ants to convey aphides to trees. The sweet substance called "honey-dew," exuded by aphides, is eaten by ants; and to obtain this, they frequent those parts of plants where the aphides are lodged. To destroy aphides, syringe the trees or plants with tobacco-water, or strong soap-suds.—Eds.

Horticultural Items.

Strawberry Culture.—The *Farmer & Mechanic* gives the result of the experiments of C. H. Starr, of Groton, Ct., on half an acre of moist loam, manured 10 cords with equal parts of sea weed and fish manure. Plants of Hovey's Seedling, fertilized with staminates, in rows three feet apart, and 18 inches in the drill, set in the spring, yielded the second year 2000 quarts, some of the berries being 4½ inches in circumference. The expenses were, 10 cords manure, 20 dollars; 5000 plants, 10 dollars; labor the first year, 50 dollars; the three succeeding years, 80 dollars each; total for four years, 320 dollars. The profits would be 25 bushels of beets between the rows the first year, 10 dollars; 6,000 quarts strawberries the three succeeding years, at 12 cts., 720 dollars. Nett profit on half an acre for four years, 410 dollars, or 102 dollars per year. The experiment, however, appears to have extended to the first year of fruiting only, and the expenses might, doubtless, have been much lessened by horse cultivation.

Influence of Manure on Roots.—Hoare, in his Treatise on the Vine, states that a bone was placed in a vine border, surrounded by dry clay. The vine sent a root directly through the clay to the bone. In its passage it threw out no fibres, but when it reached the bone, which was rich in fertilizing material, it sent out minute ramifications, and by degrees entirely covered it.

Hardiness of Sweet Apple Trees.—In Wisconsin, where the thermometer not unfrequently sinks to 15° or 20° below zero, and where the fertility of the soil induces a very rapid growth in summer, the tenderer fruit trees are often severely injured in winter. A correspondent of the Prairie Farmer states that *sweet* apples are, for the most part, more hardy than acid ones, and better adapted to very severe climates. Out of one hundred and fifty varieties, twenty-two were sweet apples; of the latter, eleven proved themselves more hardy than any other eleven in the whole list, and only three of the sweet apples appeared to be tender.

Diffusion of Seeds.—In boring for water at a spot near Kingston-on-Thames, some earth was brought up from a depth of three hundred and sixty feet. This was carefully covered with a hand-glass, to prevent the possibility of any seeds being deposited on it, yet in a short time plants vegetated from it.

THE DEPARTED.

BY SIDNEY DYER.

How sad to return to the home where, light hearted,
We mingled in pleasures of friendship each year,
And find from its halls those stars have departed
Who once were the light and the life of its sphere.

Their forms only granted awhile as a token
Of love from their Maker, are doomed to decay;
Like cloud-wreaths at ev'ning which rude winds have broken,
Their vision-like beauty soon faded away.

We hung on their lips as they gave their last greeting,
And bade them adieu with a tear-moistened eye;
And sorrowed to think it would be our last meeting
'Till we pass to their own starry home in the sky.

Tho' we hear not their songs, and beneath their light fingers
The chords of the harp may ne'er thrill to their strain,
Yet deep in the memory a melody lingers,
And in its sweet echoes we hear them again!

Farewell, dearest friends! ye have left us benighted,
Alone in the world our sad loss to deplore.
And think on the days when we lingered delighted,
To hear those loved voices that greet us no more!

Yet why should we mourn them though parted in sorrow,
Or at the just judgments of heaven complain?
But wait for the dawning of that promised morrow—
In bliss we shall meet them to part ne'er again!

Louisville Journal.

The Poultry Yard.

The Swan.

The family of Swans, (*Cygninæ*,) embraces nine known species; viz., 1. The Mute Swan, (*Cygnus olor*;) 2. Polish Swan, (*C. immutabilis*;) 3. Bewick Swan, (*C. bewickii*;) 4. Hooper, or Whistling Swan, (*C. musicus* of Bechstein;) 5. American Swan, (*C. americanus*;) 6. Trumpeter Swan, (*C. buccinator*;) 7. South American Swan (*C. anatoides*;) 8. Black-necked Swan, (*C. nigricollis*;) 9. Black Swan, (*C. atratus*.) Of these, the four first-named are reckoned as belonging to Europe and Asia, the fifth and sixth to North America, the seventh and eighth to South America, and the ninth to New Holland.

Our cut represents the Mute swan, usually called in Europe, the domestic swan. The majestic and graceful movements of this bird have been admired from the earliest times. In England it is said to be a "Royal bird, in which no subject can have property when at large in a public river or creek, except by grant from the crown." This species has been imported to America, and is occasionally found as an ornament to the grounds of gentlemen of taste.

71—MUTE SWAN.

The male and female mate in pairs. The female lays from five to seven eggs, and the period of incubation is six weeks. The young are called cygnets. They are at first clothed with greyish brown down, and they do not become entirely white till they are three years old. The bird is very long-lived—instances being known of its having lived more than a century. Its natural food is aquatic plants, but it readily eats any kind of grain.

There are other species of swans which appear to be susceptible of partial domestication. Martin states that the Hooper, as well as the Polish swan will breed in confinement, with access to a pond or sheet of water. This is true, also, of our American swan, which in several instances has been known to breed in a state of captivity. It is a noble bird, nearly as large as the mute swan, but is inferior to the latter in gracefulness and beauty.

The flesh of young swans is of good quality. Formerly it was held in great estimation. We learn that it is still served up in Europe, on occasions of public banquets. But swans are kept chiefly as ornament,—not for food.

The Canada Goose.

Closely allied to the swans, are some species usually included in the *Anserinæ* or Goose family. The Canadian, or American wild goose, (*Anser canadensis*,) and the Chinese goose, (*A. cygnoides*,) occupy, as a writer observes, "a sort of debateable ground," so that naturalists have been in doubt as to which family they should be referred; and hence some have applied to them the name of swan-geese.

The Canadian goose is extensively known. It is a migratory bird, and in its semi-annual journeys, traverses the northern part of the continent almost from the equator to the pole; and there are but few of the inhabitants of this country that are not familiar with its shrill and animating cry. Its autumnal flight lasts from the middle of August to the middle of October, and the vernal flight from the middle of April to the middle of May. Various stops are made, however, at convenient points, between the winter and summer localities.

It breeds in its wild state, only at the north. Its favorite resort is the coast of Labrador, and the region about Hudson's Bay; though Hearne speaks of having seen great numbers within the Arctic circle, pushing their way still northward.

To the inhabitants of the regions where it breeds, the bird is regarded as an important source of subsistence. Its arrival in spring is anxiously looked for, and the Indians denominate the month the goose moon. It is said that the carcasses of these birds are dealt out as rations to the men employed by the Hudson's Bay Company. "One goose, which when fat weighs about nine pounds, is the daily ration to one of the Company's servants during the season, and is reckoned equivalent to two snow-geese, (*A. hyperborea*,) or three ducks, or eight pounds of buffalo and moose meat, or two pounds of pemmican, or a pint of maize and four ounces of suet." [*Richardson*.] Those which are killed after the weather becomes cool in the fall, are frozen and kept in the feathers for a winter stock of provisions.

72—CANADIAN GOOSE.

Richardson describes the habits of these geese in his *Fauna Boreali-Americana*, as follows:

"About three weeks after their first appearance, the Canada geese disperse in pairs through the country, between the 50th and 67th parallels, to breed, retiring at the same time from the shores of Hudson's Bay. In July, after the young birds are hatched, the parents moult, and vast numbers are killed in the rivers and lakes, when from the loss of their quill-feathers, they are unable to fly. When chased by a canoe, and obliged to dive frequently, they soon become fatigued, and make for the shore with the intention of hiding themselves, but as they are not fleet, they fall an easy prey to their pursuers. In autumn they again assemble in flocks on the shores of Hudson's Bay, for three weeks or a month previous to their departure southwards."

The Canada goose has been domesticated and is not an uncommon inhabitant of the poultry-yard, either in this country or in England. It does not breed till it is three years old. It is somewhat larger than the common goose, and its flesh is better; it has also more feathers and of better quality. It is very hardy, and rears its young with much certainty. It is believed to be quite as profitable as the common kind; and considering its beauty and usefulness, it would seem desirable that it should be multiplied in a domestic state.

The Canada goose will breed with the common, and also with the Chinese goose,—but the hybrid offspring are in all cases, incapable of procreation. Some poultry-men, however, make it an object to breed mongrels, as they are called. They grow rapidly, and acquire a larger size than either of their parents, and their flesh is of so fine a flavor, and so highly prized, that it readily commands a higher price in the market. The finest mongrels are produced between the wild and the Bremen, and the wild and the Chinese geese.

It is stated on the authority of Buffon, that the Canadian goose, kept in a domestic state in France, was found to interbreed familiarly with the swans. Have any attempts been made to cause this goose to breed with the American swan, and with what success?

It may be remarked that the wild goose (*A. palustris*) of Europe, is the parent of our common domestic goose, and of course a distinct species from the Canadian goose.

The Farmer's Note-Book.

The Farmer's Wife.

EDS. CULTIVATOR—Be good enough to insert the following article from the *Springfield Republican*, and the remarks I have thereto appended, in your pages.

'The life of the farmer is so often made the subject of complimentary remark, so often praised for its peacefulness and independence, that the farmer's wife might very rationally be supposed to be the happiest woman in the world. From her relation to the "lords of the soil," she should be the lady of the soil, a peaceful, healthy, independent woman. That the reverse of this is the general fact, will be universally conceded by the wives of the farmers.

'A young farmer arrives at an age when he thinks it time for him to get married and "settle down." He has had a respectable education, and wants a woman who is his equal. He looks about him, and makes his choice. She is a girl bred beside him in the country, has been well educated; reared by careful parents, and is in the truest sense, a lady. She loves books, possesses skill and taste in music, and is in all points fitted to reign the queen of a happy home. She becomes the wife of the farmer, is ambitious to do as much as her neighbors, and her husband is soon avaricious enough to allow the woman of his love to become his most devoted drudge. From thenceforth her life is one of the most unremitting toil. It is nothing but mend and botch, cook and bake, wash and iron, churn and make cheese, pick up chips and draw water, bear children and nurse them. The family enlarges, the husband grows wealthy, becomes important in community, rides to town every day, takes his ease when he chooses;—but the cares of his faded and broken down wife know no relaxation. She may outlive her husband; but rarely does, and not unfrequently a second wife comes in to share in the money that should have been enjoyed by her predecessor, through a quiet old age of rest.

'This is no fancy sketch. It is drawn from life, and in every country-town and neighborhood, its truthfulness will be recognized. Now we despise the good-for-nothings of fashionable life as much as any one, and have no affection for drones in any hive. We are aware that circumstances sometimes demand extreme labor of the farmer's wife, but in New England those circumstances do not prevail, and while we would leave no woman to eat the bread of idleness, we would see the class of which we are speaking released from that circle of everlasting drudgery which deprives them of the privilege of relaxation for a day, and the time which they would gladly devote to the maternal education of their children.

'From this life, the girls of our day are learning to shrink; not because they are lazy, but because they know that they are to be sacrificed. Not because the calling of the farmer is not respectable, but because they do not wish to become his mistress, maid-of-all-work, nurse and boot-jack. Now the foundation of all this wrong is in that avaricious spirit, handed down from father to son, which makes the dollar the standard of respectability, and land the only fountain of happiness. We hope to see the day when the farmer's wife shall share in the peacefulness and independence of the farmer's lot, and we call upon the ladies to engage in the reform themselves, and to teach the lords of the soil that there is something to live for besides potatoes, and that life can be enjoyed more truly by a proper preservation of the health, beauty, accomplishments and good spirits of their companions.'

The writer of the above, pronounces it "no fancy sketch." I will not undertake to say how far the "fancy" was drawn on for the ground-work of the "sketch;" like many of the "tales" of the present day, it may be "*founded* on fact;" but at the same time, I am confident is not a fair representation of the condition of the people to whom it ostensibly refers. It is not, to be sure, improbable that a New-England girl may have had the misfortune to be united to a man who is "avaricious enough to allow her to become his most devoted drudge,"—he may have grown wealthy, and become "important in the community,"—may "ride to town every day, and take his ease when he chooses;" while she, broken down by toil and care, may have met a premature death—a calamity by which "a second wife comes in to share the *money* that should have been enjoyed by her predecessor!"

Such cases should, certainly, excite commiseration for the wife and censure for the husband, though it is most likely his culpability has arisen rather from thoughtlessness than "avariciousness." But the preservation of his wife's health, the alleviation of her burdens, and the advancement of her happiness, should have been his constant aim; and if he has neglected or overlooked these, he has not duly regarded the injunction of the Apostle—"So ought men to love their wives, as their own bodies."

But it would be wrong to suppose that farming in New England is so lucrative a business that those who follow it generally get *rich*, or that the most thrifty among them spend much time in riding to town and taking their ease; and it would be an unjust imputation on the character of our farmers, to suppose that, as a class, they cherish the boorish disposition that would degrade a wife to "maid-of-all-work, nurse and boot-jack," or that they are generally influenced by "that avaricious spirit which makes the dollar the standard of respectability, and land the only fountain of happiness." Hence the "sketch," except, perhaps, as an *individual* description, is untruthful.

That the wives of New England farmers have their trials, ("hardships," if you please,) in common with woman in general, is admitted; but that their lot is *comparatively* hard, I think is disproved by a careful survey of rural life in *general*. In support of this position, I might institute parallels in reference to different sections or countries, but remembering that comparisons are sometimes "odious," I forbear.

The circumstances in which New England women are placed, are in some respects peculiar. It is often remarked that the greatest trouble experienced in conducting farm operations in this section, is the difficulty of obtaining female labor. This arises from the existence of numerous manufactories, where many females find ready employ at good wages. The consequence is that most of that class who "go out to work," go to the "factories," leaving but few to be obtained for the performance of ordinary "house-work."

Thus it is seen that "circumstances" *do* "prevail" in New England, by which the management of domestic affairs, necessarily devolves in a great degree on the mistress of the family and her daughters. To counterbalance this, there are many advantages. Great pains are generally taken to lessen and lighten female labor. In the construction of houses, and in all the internal arrangements and fixtures, the important principles of convenience and *labor-saving*, are kept prominently in view. Water, for all purposes, is commonly brought into the house, and in many instances, into all the apartments where it is wanted. The value of this item, can, perhaps, be best appreciated by those who have known something of the labor of "toting" water, sometimes a distance of many rods, up steep ravines or hill-sides. Fuel is generally secured in a dry condition, in a building attached to the dwelling, where it can be reached at all times, without exposure. In the culinary department, there are all the improvements in economising labor, which Yankee ingenuity has been able to devise. In all operations requiring the greatest outlay of strength,—such as washing, ironing, churning, butter-working, cheese-making, &c.,—there are machines and apparatus which in some instances entirely supercede the use of hand-labor, and in others reduce it to a small amount.

Of the facilities enjoyed in New-England, for education and the cultivation of the mind, I have no occasion to speak, at present; they are sufficiently indicated by the accomplishments which the writer in the *Republican* attributes to the farmer's wife. OBSERVER. *Hartford county, Ct., August*, 1849.

Circular from the Patent Office.

We are pleased to receive the following circular, issued by the Commissioner of Patents. The inquiries are directed to the most important subjects, and are so framed as to elicit the principal facts relating to each. If properly responded to, as we trust they will be, they will bring out a mass of valuable information in regard to the agricultural resources of the different sections of our country:—

THE COMMISSIONER OF PATENTS, *in execution of acts of Congress, desires to procure information from Planters, Farmers, and others, on the following and any other points that may occur to you, connected with agriculture:*

WHEAT.—Your experience as to varieties, difference in weight, and of time in ripening; enemies and diseases, soil and manures best adapted to.

OATS.—What varieties have you tried, and with what results, particularly as to time of ripening; with their estimated value as compared with corn as food; is the cultivation of the oat becoming more or less popular, and for what reason?

RYE.—Have you knowledge of any new and valuable variety; to what use is it applied; have crops diminished of late years, without any apparently corresponding diminution in the fertility of the soil, and to what influence is it supposed to be attributed?

BARLEY.—Have any new varieties been tried, and with what results; to what uses is this grain applied in your State; if not cultivated, is it forbidden by your soil and climate?

MAIZE, (INDIAN CORN.)—What varieties most esteemed, and for what reasons; what the difference in time of ripening; is it liable to change of character and climate, and other influences, and your observations on that point; give the estimated value of the husk as compared with the blade, and of both as compared with good hay, weight for weight; what is the value of green corn for soiling cattle, and especially for producing milk; your experience as to feeding grain, whole or ground, cooked or raw?

RICE.—Variety cultivated; describe any new and valuable process for its cultivation or preparation for market.

(NOTE.)—As to all these grains, please state the cost of production and usual weight, and the probable average per acre and actual aggregate product, if known, of each in your State; whether the average product per acre has increased or diminished; whether the weight per bushel of the various grains is fixed by law in your State; and what weight is prescribed for each.

HAY.—State the comparative value, as food for stock, of clover timothy, and mixed hay; the grass seeds preferred in laying down meadows; the average yield per per acre; describe any new process in curing; have meadows been irrigated in your State, and with what effect?

PEAS.—For what purpose cultivated in your State; for food, or for improving the soil; estimated value as food for stock, compared with Indian corn; the most esteemed variety for field culture; average product per acre; value of haulm or vines compared with other fodder; average price per bushel in the last year.

ROOT CROPS.—Irish and sweet potatoes, turneps, carrots, beets, mangel-wurtzel, artichoke, and other varieties; comparative value; cost of production; weight per bushel; and the average per acre, and agrregate produce for your State.

COTTON.—Average yield per acre and per hand in your State; aggregate yield of the whole State for 1849; describe new varieties and processes of cultivation; manures best adapted to; cost, per pound or bale, of production; freight, charges, commissions, &c., paid by the planter.

SUGAR.—Whether of cane or maple; the product per acre; describe any new process of cultivation or manufacture; variety of cane cultivated; its enemies and diseases; cost of making sugar; freight, charges, commissions, &c., paid by the planter.

HEMP.—On this head give any information that you may deem valuable and new as to varieties, processes of cultivation and preparation for market; soil and manures best adapted to; cost of production.

BUTTER.—Quantity made in your State; average annual produce per cow; are cellars or spring-houses preferred?

CHEESE.—Same questions.

HORSES AND MULES.—Number raised in your State, average value of each; comparative value for farming purposes; where is your market for them?

Number of Horned Cattle in your State; average value of at three years old; where driven to market; cost of keep per head per year; which of the improved races is preferred?

SHEEP HUSBANDRY.—What the prevailing races; what the condition of this branch of industry; amount of wool clipped in the year, and average weight of fleece of different races; cost of keeping sheep through the year per head; where your markets; what your system of selling; have you wool depots, and are they found advantageous for wool grower and manufacturer; what number killed by dogs in your State?

HOGS.—Average weight at a given age; average weight consumed per head; proportion of live to nett weight, and cost of production per pound.

RAIN.—Time and degree of highest and lowest range of thermometer, and the mean temperature of the year;

also, inches of rain water in each month, and aggregate for the year.

Labor.—Cost of, with and without boarding, and cost of boarding.

Tar and Turpentine.—Quantity and value of, produced per hand.

Plaster and other **Fertilizers.**

Lime.—If used as an improver in your State, how much is thought to be best per acre, and how often applied?

Orchards: *fruits, transplanting of trees, &c.*—Information on these and kindred matters will be of universal interest.

On the cultivation of the **Vine**, on **Grapes**, and **American Wines**, communications are particularly solicited.

P. S. Please answer this as soon as convenient after you procure the information, and before the 1st of December; and, in the mean time, please name any one to whom this circular may be sent in the hope of fuller information. If not room on the circular, please reply on a separate paper, referring distinctly to the queries.

Phosphate and Carbonate of Lime.

The favorable effects of phosphate and carbonate of lime on vegetation, have been shown in repeated instances; and it has been considered important to ascertain by what means these substances find their way into vegetables. M. Lassaigne, a French writer, has published the details of some interesting experiments made by him in reference to this point, a translation of which we find in the London *Farmer's Magazine*. The experimenter directed his investigations to the following inquiries:

1st. If phosphate of lime, such as is found in bones, can be dissolved in water containing carbonic acid.

2nd. In what quantity it can be so dissolved.

3rd. If this solution can or cannot favor the germination and vegetation of cereals.

4th. Lastly, if in different parts of the fully grown plant, we could detect a certain quantity of this same phosphate.

First Experiment.—*The phosphate of lime, (as found in bones) is soluble in water saturated with carbonic acid, at ordinary pressure and temperature.* This proposition, which we have deduced from experiments, has been by Dumar and Gasparin asserted without proof experimental. It is in this state of things that in 1846 we announced to the academy of sciences, that water saturated with carbonic acid, at the temperature of 50°, and at the mean pressure of the atmosphere, dissolves of the phosphate of lime of bones 75-10000 parts, or 1-1333 part of its weight. We stated this solution is decomposed by heat, and that the phosphate is also thrown down by adding potash or ammonia to the solution, so as to saturate the carbonic acid. We also found that water containing carbonate of lime in solution by carbonic acid had, likewise, the power of dissolving small quantities of the bone phosphate. After settling these points we tried several experiments on fresh bones, and on bones which had lain in the earth for some time. The result is, that the latter, when reduced to the size of a nut, and brought into contact with water saturated with carbonic acid, yielded at the end of eight or ten hours, a certain quantity of the inorganic bases, that is to say, of the carbonate and phosphate of lime. This quantity we find to be increased by reducing the bones to powder. An experiment to ascertain the relative proportion in which the phosphate and carbonate of lime are dissolved gave results differing but little from those obtained by Berzelius. Our results may therefore be considered to have established the fact that the salts of lime of the same chemical composition as bones, after being allowed to decompose for some time in the soil, can be dissolved in rain water in consequence of the carbonic acid it contains in solution.

Second Experiment.—The preceding experiments naturally lead us to inquire what effect this solution of phosphate and carbonate of lime could produce on vegetation. Before studying this question, which is interesting both in an agricultural and physiological view, we thought it advisable to place ourselves in the most favorable situation to answer it correctly.

1st. We sowed four grains of wheat in two glass vessels of the capacity of about 25 cubic inches, each containing about 4,000 grains (?) of sand, purified by washing with muriatic acid. Each vessel was watered so as to render the sand moist, the one with *water containing carbonic acid alone*, and the other with *the same water also holding in solution* the phosphate and carbonate of lime.

2nd. The two vessels were then placed on a porcelain plate, and covered with a large bell glass, in order to preserve them from contact with any dust floating in the air. This apparatus was so placed on a wooden stand that it might be placed in the sunshine; the temperature of the room kept as nearly as possible at the 50°. The wheat all vegetated in ten days, the plumule was developed as usual, and gave two leaves to each plant, of the most beautiful green color. After this the development of the two sets of plants were as follows: The growth of the grains of wheat watered with a solution of carbonic acid, and phosphate and carbonate of lime, was much more rapid than those watered with the solution of carbonic acid alone: the leaves furnished by the former grains were generally larger, stronger, and of a deeper green. But 25 days after germination, the vegetation of the plants, placed in such abnormal conditions, languished, the leaves assumed a yellow color at their extremity, and this alteration was gradually propagated through the whole plant. At this epoch, the height of the leaves produced by plants watered by carbonic acid alone was from 2¼ to 2¾ inches in height, whilst the leaves produced by the grains grown in the sand watered with the solution of bone earth were from three to four inches high. The plants were drawn out of the sand as soon as ever they appeared to lose their vigor, and after being well washed with water, they were dried to ascertain the quantity of dry matter they contained. The leaves grown with the solution of bone-earth contained 0.193 grammes, while those from the other experiment contained only 0.153 grammes of dry matter. Thus giving, in both cases, the advantage to the experiment with the bone-earth.

Third Experiment.—The results of this agreed with the preceding. The vegetation caused by the solution of bone-earth again exceeded that caused by the carbonic acid alone, in the proportion of 12 to 8. The development of the roots of each lot of plants, was also in the same proportion. It was not sufficient to have shown by these direct experiments the stimulating effect of the solution of phosphate and carbonate of lime: it was also requisite to ascertain whether these substances had been absorbed during vegetation. To ascertain this, we burnt off the dry leaves in a platina crucible, and obtained from the leaves of the wheat grown with the solution of bone-earth, *four or five times as much inorganic matter* as from those grown from the solution of carbonic acid alone. And the further analysis of these ashes has shown the presence of phosphate and carbonate of lime in much larger quantities than in the other experiment. These results, by positively demonstrating the special influence of these salts of lime, also enable us to explain the action of certain manures. Besides the gaseous and ammoniacal products which are yielded by the decomposition of animal matters, the phosphates and carbonates of lime which they contain must also perform an important part in the assimilation of vegetables. Certain species of these latter require for their perfect development, certain mineral substances which decomposing animal matters can supply, and which the plants obtain from them by assorting them in a state of solution.

In relation to the above, the translator adds the following:

There is one very important conclusion to be drawn from this experiment which the author has overlooked. It was not to be wondered that the plants watered by carbonic acid refused or were unable to come to perfection, *but the fact that even bones were not able to mature the plants of wheat* is rather startling, and we refer to it here as another corroboration of the view advocated by one of the parties in a recent discussion "on the composition of manures," which has been carried on in this magazine for some time past. Notwithstanding the acknowledged importance of phosphate of lime, it would seem, both from the above discussion and these experiments by Lassaigne, that it is not sufficient of itself to bring the plant to maturity. If this be established as a fact, it ought to influence farmers in the purchase of their manures, of which it would appear that those only can be of permanent benefit to his farm which contain many other ingredients equally essential to vegetation.

Analyses of Manures.

At a late meeting of the Highland Agricultural Society, Mr. Finnie spoke of the great advantage which had been derived by farmers in Scotland from the analyses of portable manures, upon which, he estimated, nearly one-half of the green crop of that country is dependent. The amount of guano, for instance, imported in 1837, was upwards of 220,000 tons. Great adulteration had been practiced with guano; and bone-dust had been mixed with ground oyster-shells. Various manufactured manures, of the constituents of which the farmer could not be acquainted, were offered for sale. In illustration he related the following: Some years ago I joined with two or three farmers in the purchase of some tons of nitrate of soda. None of us derived any benefit from the application of it. Most fortunately I had some left—got it analysed by Mr. Kemp at the College; and when the secret was explained, it was to a great extent mixed with common salt. I heard of a cargo shipped to a party in London; a chemist was ordered to examine it before taking it from the ship. The adulteration was detected, and immediately the ship was ordered off to Scotland, and sold amongst the farmers. I once purchased a quantity of guano from a party in Leith. Professor Johnston had given an analysis of it, but the sample sent to him had been very different from the stock. I found upon taking delivery that all was not right. I then had a sample from the stock analysed, and had no difficulty in procuring an abatement of 10 per cent. from difference of value. I cannot conceive how any agriculturist who expends his hundreds a-year upon portable manures is justified in applying them before being tested, and would grudge a few shillings per annum to obtain a chemist of skill who could satisfy him as to the purity of the article upon which he is not only expending a large sum of money, but upon the genuineness of which his green crop, and every succeeding crop in the rotation, is dependent; for, without a knowledge of the nature and properties of the materials employed by the agriculturist, it is evident that the result of many of the laborious and extensive processes incident to his daily occupation must be a matter of mere chance—thus contributing more than any thing else to the precariousness of the profits upon which his prosperity depends. I may be told this is a tenant's question, and let him look after his own interest and he will fare the better; but I hold whatever is necessary for the tenant cannot be dispensed with by the landlord; and if from not having a ready and cheap way of having his manures analysed, the loss of a crop is the consequence, is not the landlord's rent endangered? But I would respectfully submit that these portable manures, now so important an element in good farming, and for which I would say a chemist's services are required, leaving every other consideration, have done much already for the proprietors of land.

West-Highland Cattle.

In several of the last volumes of *The Cultivator*, we have given cuts and brief descriptions of the West-Highland cattle of Scotland; and we have more than once expressed our desire that some measures might be taken for the introduction of this valuable breed into this country. The following notice of them occurs in an account of the Falkirk Tryst, a celebrated Scottish fair for the sale of cattle and sheep. The account from which our extract is taken, appeared in the *Edinburgh Quarterly Review*.

Every isle and holm which opposes it rugged crags to the fury of the Western Ocean between Islay and the Orkneys; every mainland glen from the mull of Cantyre to Cape Wrath, pours in its pigmy droves, shaggy and black, or relieved only, as to color, by a sprinkling of reds, and of duns graduating from mouse to cream-color. From Northern and Eastern Sutherland, Caithness, Ross, and Inverness they come in longer on the leg, smooth [short-haired] and vulgar. From central Argyle, Perth, and from some of the islands, come the carefully bred West-Highlanders; these are the flower of the show, engage every one's talk, and attract every one's attention; every individual of them is a delight to the eye of a connoisseur. Aberdeen and Forfar send in droves of large and bony, but useful bullocks. A few Ayrshire cows and heifers for the dairy, some miscellaneous lots and a few Irish, make up the account. We do not know the numbers; we have heard of 30,000, and again of 60,000. The October show is the most imposing. The almost universal color is black; the moor is in appearance, one black mass. You may be accommodated with every size, from that of a Newfoundland dog, to a bullock of one hundred stones. The cattle are mostly in the hands of dealers, having been bought up at the northern and western markets; many, however, of the best West-Highlanders are brought to the Tryst by their breeders, and you may see a kilted laird from the Hebrides standing, like Rob Roy, at the tails of his own bonny stots and queys. A few small lots of a score each may be found, but they generally run from 50 to 300 and upwards. A purchaser of less than the whole of one of these large lots gets his number, not by selection, but by a cut: a drover passes through the black mass and cuts off by estimation the number; they are then counted and made up to the required figure by alternate selections on the part of the buyer and seller. No trading class can furnish more intelligent men than the Scotch stock-farmers—perhaps, indeed than the Scotch agriculturists generally; men well educated, of courteous and simple manners, of great intelligence and much general information, enterprising, and keenly alive to every reported improvement.

Top-Dressings for the Potato.

Eds. Cultivator—If, as Professor Johnston thinks, "the benefit to be derived from a skilful treatment of the potato plant, does not terminate with the greater immediate crop we reap, but extends also, into future years, improving the seed, and rendering its after cul-

Table No. 1.

Kind of Top-Dressing	Quantity per acre of top-dressing.	Cost per acre of top-dressing.	Produce per acre, in tons.	Value per acre of produce.	Increase of product per acre by top-dressing.	Cost per ton of increased product.	Profit per acre in consequence of top-dressing.
	Cwts		Tons. cwts. qrs		Tons. cwts. qr.		
1. None, ...	0	$0 00	12 15 0	$117 93	0 0 0	$0 00	$0 00
2. Sulphate Soda, ...	2	3 75	12 15 0	117 93	0 0 0	no inc	loss.
3. Sulphate Magnesia,.....	1½	3 12	13 5 0	122 53	0 10 0	6 25	1 50
4. Sulphate Ammonia,.....	1½	7 75	14 1 0	134 13	1 15 0	4 42	8 46
5. Nitrate Soda,...........	1½	7 75	16 0 0	148 00	3 5 0	2 38½	22 31
6. Sulphate Soda, ... }	1½						
Nitrate Soda, ... }		6 19	18 0 0	166 50	5 5 0	1 18	42 38
7. Nitrate Potash,.........	1½	10 [illegible]	18 10 0	171 12	5 5 0	1 87	42 44
8. Sulphate Soda,....... }	1½						
Sulphate Ammonia,.. }		6 19	18 16 2	174 70	6 2 2	1 01	50 58
9. Nitrate of Soda,...... }	1						
Sulphate Magnesia, .. }	1	7 25	22 10 0	208 12	9 15 0	0 74½	82 94

Table No. 2.

Kind of Manure.	Quantity per acre of Top-Dressing.	Cost pr acre.	Produce per acre, in tons, &c.	Value per acre of produce.	Increase of product by the dressing.	Cost per ton of increased product.	Profit pr acre in cons'q'nce of dressing.
			Tons cwt. qrs.		Tons. cwt. qrs.		
1. None, ...			13 19 0	$124 87			
2 Salt, ... }	1 cwt						
Quick Lime,......... }	4 cwt.	$3 00	14 17 0	137 36	1 7 0	$2 23	$9 48
3. Nitrate of Potash,......	2 cwt.	13 50	15 5 0	141 06	1 16 0	7 72	2 68
4. Bone Dust,.............	18 bu.	11 25	15 13 0	144 76	2 3 0	5 23	8 63
5 Farm Yard Manure,....	10 t'ns	15 00	16 3 0	149 40	2 13 0	5 66	9 13
6. Nitrate of Soda,........	2 cwt	9 17	16 19 0	156 79	3 9 0	2 66	22 75
7. Nitrate of Ammonia,...	2 cwt.	13 87	17 15 0	164 18	4 5 0	3 26	25 43
8. Guano.	3 cwt.	10 50	19 11 0	180 84	6 1 0	1 74	15 45

Table No. 3.

Top-Dressing.	Quantity.	Cost.	Produce.	Value.	Increase.	Cost of inc.	Profit.
			Tons cwt. qrs.		Tons. cwt. qrs	Per Ton.	
None,..............			7 10 0	$69 37			
Soot,..........	40 bush.	$4 17	10 7 0	95 75	2 17 0	$1 46	$22 91
Manufact'r'd Guano,	2½ cwt.	9 37	9 7 0	86 50	1 17 0	5 07	7 76
Common Guano,....	3 cwt.	7 50	11 7 3	105 37	3 17 3	1 91	28 50

ture more productive," it behooves my brother farmers to pay attention to everything that can possibly improve it, as it is undoubtedly the most profitable and certain crop we raise. Therefore, I wish through your valuable journal, to bring under their notice the advantages of "top-dressing" with artificial manures. But at the same I wish them to understand that I am not speaking from practical experience, for until within the last month, I have not myself thought of it, though I hope next year to try it, and if so to give you the result.

Happening into a book auction one market night, I purchased "The Potato, by G. W. Johnson," a book published in London as one of a series, entitled "The Gardener's Monthly Volume." I have studied it thoroughly, and think that others could do so with great advantage, but as it is an English work not reprinted in this country, that will be impossible for most of your readers; therefore I have taken the liberty of preparing from it the accompanying tables and remarks, illustrative of the benefits to be derived from "top-dressing." First, let us examine some experiments made by Mr. Fleming, of Barochan. He had a light, loamy soil, with a hard retentive subsoil. He planted his potatoes on the 18th of April, in rows 26 inches apart, manuring the bottom of the rows with farm-yard manure, at the rate of 40 cubic yards per acre. The top-dressings were added on the first of June.

The Potato was, what in England is called the Early American. Table No. 1 shows the result. The price of potatoes that fall was £1.13s, (say $9.25) per ton, and the cost of the top-dressing includes hauling and putting it on.

Is not table No. 1, worthy of attention, of study? If, after our potatoes are planted, we can by an outlay of $7.25, reap an additional clear income of $82.94, shall we not do it?

This table (No. 1,) is worthy of study on another account. What produced the great increase in No. 9? Was it the soda? The soda alone (5) in larger quantity only gave 3¼ tons increase. Was it the magnesia? The magnesia alone (3) only gave ½ ton increase. I am rather disposed to give the soda the credit for the crop, as potatoes do not contain the one-half of one per cent. of magnesia; and Prof. Johnston, in his suggestions for experimental agriculture, mentions a crop of 30 tons produced with a mixture of one-third nitrate, and two-thirds sulphate of soda; whilst, on the other hand, Fleming mentions another experiment made by him, in which the magnesia only gave 11¼ tons. Yet if the soda made the crop, why did not the soda (5) by itself do as well? Possibly there was some acidity in the ground, which neither salt by itself corrected, but which when combined they operated on.

The experiments as per table No. 2, were made entirely with "top-dressing," the land being prepared on what is known throughout Ireland as the *Con-acre* system. That is land that has been long in grass, is marked out in ridges, the sets are laid on the sod about a foot apart, and covered about three inches deep with soil from the furrow. A shocking bad system, but one that occasionally yields a good crop. The sets were planted on the 15th April, and after they had sprouted, but before the shoots reached the surface, the dressings were applied, and an additional quantity of about two inches of earth placed upon the top. This was done on the 20th of May. The dung was well rotted. The other manures were mixed with dried mould before they were applied. The salt was that which had been used in a provision store, and consequently contained a considerable quantity of blood, fat, and other animal matter, which probably made it of greater utility than pure salt would have been.

The results as per table No. 2, are curious. Salt and lime produce the additional crop at next to the least cost per ton, yet they are *fourth* on the list as to profit. They produce cheap, but not in sufficient quantity. In this experiment, the nitrate of potash is the worst, making the extra product cost $7.72 per ton, whilst in the one above, it made it cost only $1.87, and was third best out of the nine, but then stable manure was used. The bone-dust and farm-yard manure are nearly equal, the former growing at a less cost, but the latter in greater quantity. Both of these will benefit the next crop, in all probability the farm-yard manure the most. The guano produced the greatest quantity at the lowest cost, but I doubt whether it will in any manner avail the next crop; but still in this experiment it was undoubtedly the best, as the $20 profit it made over either of the others, will more than buy any kind of manure wanted the next season. But the difficulty is, when the farmer has the $20 in cash, to get him to spend it again for manure.

Experiment No. 3, was made by Mr. Campbell, of Derry. The potatoes were planted on the 7th of May, in ground prepared in the usual manner, and manured with 30 tons farm-yard dung per acre. The top-dressing was applied early in June.

In this case again, the guano is the most profitable, though here it does not produce at the lowest price per ton.

I should like to make some further remarks, and ask my brother farmers a few questions for my own information, but must now bid them adieu, with the promise, with your permission, to see them again after they have reflected upon top-dressing for potatoes. S. S.

Improvements in Agriculture.

Eds. Cultivator—The table giving the estimate of the principal products of Seneca county in 1848, published in the July No. of your paper, is rendered interesting by calling to mind several important considerations.

In the census of 1845, Seneca county stood in her agricultural productions, above the average of the State. The estimate for 1848 shows a large increase per acre, and a much larger gross increase upon the productions of 1845, as will appear from the following extract, taken from the estimates of both years:

Year.	Wheat.		Barley.		Oats.		Corn.	
	bush'ls	pr. ac.	bush'ls.	pr. ac.	bush'ls.	pr. ac	bushl's.	pr. a.
1848.	644,96	17.9	124,195	21.7	411,650	38.9	409,490	32.6
1845.	483,773	14.8	50,071	13.6	292,307	35½	204,940	26.8
1840.	398,505		11,147		232,446		177,795	

One interesting consideration that this table suggests, is, that the farmers of Seneca county, availing themselves of their superior soil and location, and the lights that science is throwing upon the business of agriculture, are making a noble stride towards the highest state of good husbandry.

Another interesting consideration is suggested in the fact, that notwithstanding the superior advantages and management of the farmers of Seneca county, still the income on their capital and labor, is vastly inferior to that of any other of the great industrial interests of our country; and as upon the prosperity of agriculture depends the prosperity of all other interests, it shows how important it is that it should receive, both directly and indirectly, in every practicable way, the first consideration and the fostering care of our government.

Seneca county has about 194,700 acres of land. That land, together with the stock and utensils of her farmers, constitute their invested capital. That capital cannot be estimated at much less than $5,000,000. Their annual agricultural products amount to about $1,200,000, or 25 per cent. upon their capital. The income of all the other great industrial interests of our country; is shown by the census to be from one hundred to two hundred per cent. upon their capitals.

The population of Seneca county in 1845, was 24,972. The number of voters was 5,459, four-fifths of whom were employed in agriculture—if the same proportion exists there, in their population that usually prevails in the United States. Of course, the income of each individual engaged in that county in agriculture, was less than $300 during that year. The income of each individual engaged in the other pursuits, as shown by the census, averages annually near $700.

Another important consideration is suggested; that while the grain-growing business produces less on its capital and labor than is produced in other pursuits, yet the grain growing business of that county is better than that of wool-growing, and the farmers there will readily say that they cannot afford to grow wool on land which is well adapted to the growing of grain.

Another important consideration is, that although in Seneca county, as elsewhere, the business of agriculture produces less on its capital and labor than that of other interests, still it is the most desirable and commendable business of any in which the people of our country are engaged.*

First, because the capital invested in it is more secure than that invested in any other business.

Second, because men engaged in it enjoy greater independence. They are less dependant upon each other in that pursuit, than in any other.

If their income is less, their desires are less, and with a reasonable exercise of industry and prudence, a certain amount of income over expenditure, is always available.

In the business of agriculture, men of abilities and acquirements may enjoy as high degree of consideration as those do in almost any other employment.

The business is healthful, morally and physically, and while it produces as few causes for disquiet, I can conceive of no business out of which grow more sources of enjoyment.

It is a business, however, which is susceptible of infinite improvement, and men who, as individuals or statesmen, contribute most to such improvement, are deserving of the highest consideration from their countrymen.

One of the most important improvements yet to be made, is that science and mind may be brought to bear, so that labor may never be wasted by being misapplied.

Another improvement is, to devise such implements as may lessen the amount of labor to be performed.

Another and not less important improvement, can be made in opening to the products of the farmer, an unrestricted market at home and abroad, and in creating facilities for transmitting such products to such markets. A. Farmer. *Hillsdale, Columbia county, N. Y., July* 16, 1849.

American Institute.

The Twenty-second Annual Fair of this Association will be held as follows: Agricultural and Horticultural Exhibition on Tuesday, the second of October, at Castle-Garden, New-York. Plowing and Spading Matches on Thursday, the 4th of October, at Flushing, Long Island; Central Convention of Fruit Growers, on Tuesday, the 2nd of October, in the New Saloon, at, Castle Garden; Cattle Show on Wednesday and Thursday, the 10th and 11th October, at the corner of Twenty-Third Street, and Fifth Avenue, rear of Madison Cottage.

Liberal premiums are offered for Short-horn, Hereford, Devon, Ayrshire, Alderney, and "native" cattle; also, for blood and farm-horses; for Merino, Saxon, South Down, and long-wooled sheep; for swine, poultry, &c.

The general arrangements for the exhibition are comprised in the following programme:

First Week. *Monday, Oct.* 1—Will be appropriated for the arrangement of the contributions. Vegetables, Fruits and Flowers, for the Horticultural Room, should be brought this day before 12 o'clock.

Tuesday, Oct. 2.—The exhibition will open to the public at 9 o'clock, A. M., and close at 10 o'clock, P. M., which arrangement will continue during the fair. The opening address will be delivered this evening, at 7½ o'clock, in the front saloon. A band of music will play during the evening. At 9 o'clock, a grand display of fireworks.

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* By the census of Massachusetts in 1845, the amount of capital employed in manufacturing and the mechanic arts, was $46.191.-217. The number of hands employed was 129.013. The value of their products was $87.924.063. or near two hundred per cent, income upon capital employed, and near $700 annual income from the labor of each individual.

Wednesday, Oct. 3.—The Steam Engine, with moving machinery, will be in operation and contiuue during the Fair.

Thursday, Oct. 4.—Spading Match, Plowing, and Testing of Plows, at Flushing, L. I., in conjunction with the Queens County Agricultural Society. Steamboats will leave the Battery at an early hour for the Plowing ground. An address on the field.

Saturday, Oct. 6.—Fireworks this evening, at 9 o'clock.

Second Week.—*Monday, Oct.* 8.—Great Show of choice Roses and Dahlias at 12 o'clock, for special preminms. Cattle and other live stock to be exhibited on Wednesday, mnst be entered on the books this day, and pedigrees delivered to the clerk, at the Committee-room, at Madison Cottage, corner of Fifth Avenue and Twenty-Third Street. If previously sent to A. Chandler, Sup. Agent of the Institue, they will be attended to.

Wednesday, Oct. 10.—The Cattle Show will open at 10 o'clock, A. M., at Madison Cottage, corner of Fifth Avenue and Twenty-Third Street, when all the animals must be on the ground.

Thursday, Oct. 11.—The second and last day of the Cattle Show. The Hon. Levi Woodbury will deliver the Anniversary Address at the Tabernacle, at 7½ o'clock, P. M. Tickets gratis, may be had of any of the managers, or at the Clerk's desk. Music by an accomplished choir, under the direction of Mr. George Andrews.

Saturday, Oct. 12.—Pyrotechnic exhibition for premium, at 9 o'clock, P. M. Each exhibitor will be required to fire three pieces. Entries to be made on the books before 12 o'clock, M.

Wheat Culture.

Eds. Cultivator—Will you or any of your correspondents be so kind as to answer the following queries through the columns of your excellent journal ? viz:

1. What is the proper time for a clover fallow to be made for wheat ?
2. Shou'd the clover be cut or grazed before fallowing ?
3. What is the proper depth to plow to insure the greatest yield ?
4. Is early sown wheat more subject to the attack of the fly ?

The above questions cannot, of course, be answered with precision,—as the circumstances of soil and climate will have their influence,—but replies may perhaps, be given that would be *generally* applicable. Juvenis Agricola. *Long Hill, Amherst Co., Va., July* 20, 1849.

A fallow for wheat is generally commenced in June, or the last of May. There is a difference of opinion as to whether it is best to turn in the whole growth of clover, however great it may be, or whether it should be partially grazed or mowed off; and we do not think that experiments have been made with sufficient accuracy to settle the point. Bnt on one point, we think there is a general agreement among farmers who are in the practice of plowing in clover, and that is, that it is best to let it pass the stage in which it contains the most sap, before it is plowed under. The reason is, that a great quantity of green watery matter, produces an acid in the soil, which is injurious to vegetation. On this account many prefer having the clover partially fed off, and that what is left is fairly turned towards ripening.

It is common to plow fallows once or twice after turning in the sod, previously to being sown; the first (or rather the second) plowing to be done when the sod is fairly dead, and partially decomposed, and the next just before seeding, which is generally from the 10th to the last of September.

The practice has been considerably adopted of late years, to defer the plowing of clover-ley till about the time for sowing wheat, and to sow immediately on the furrow, after but one plowing. In this case it is common to pasture the clover, more or less, according to the wants of the live-stock of the farm, or to mow the first growth and save it for hay. This practice has been quite successful, especially on loamy soils, or such as do not require to be much worked to render them sufficiently friable. The great benefit of fallowing, is on land which either requires cleaning from foul plants, or from its tenacity, requires a more thorough pulverization and aeration than can be effected by one plowing.

The depth of plowing, on ordinary wheat soils, is generally seven inches. It is found that stiff soils require deep stirring; and it is not unfrequently the case, that the subsoil, in our best wheat districts, is as rich or richer in the elements which nourish wheat, than the surface soil. It only needs the action of the air to develop or render soluble its valuable alkaline and other properties. There are lands of a different character, however, on which wheat is raised—lands on which the subsoil does not thus abound with valuable saline matter; and on these lands a less depth of furrow, with a proper use of the subsoil plow, is deemed preferable to a deep burying of the surface soil, and the consequent result of bringing to the surface the comparatively barren subsoil.

Early sown wheat may form a harbor for the Hessian fly in the fall—as it is not unusual for a generation of that insect to be produced before the setting in of winter. It may not be perfected in the fall, but will remain in the larvæ or in the "flax-seed" state till spring, when it is matured and brought out by a few warm days, ready to attack the crop in full force. Where this insect is known to prevail, it is, therefore, deemed advisable to defer the sowing of wheat to so late a period that the plant would not make its appearance till cool weather should render the fly incapable of mischief.

But it should be remembered, that the course which would be a protection against the Hessian fly is *not* a protection against the wheat midge, miscalled "weevil." Early *winter* wheat is the most likely to escape the latter insect, and that which is rather late, most subject to injury. The farmer must, of course, make his calculations as to which of these enemies, he is in the greatest danger. If he is most likely to be attacked by the Hessian fly, he will sow late; if by the midge, he will sow early, *and an early kind.*

Management of Sheep.

At a late meeting of an English Farmers' Club, the subject for discussion was,—"The best method of managing a flock of sheep for breeding purposes." Mr. Hardwick remarked that in regard to breeding ewes, he should prefer keeping them well and even all the year ronnd. He did not like sudden changes from high to low feeding, or *vice versa*, though he thought ewes might advantageously have more food of a good quality after they were half gone with lamb, than before. As to the most profitable way of making up lambs for sale. if he wanted a horse to work, he would not give £5 more for it because it was fat; so with lambs, if he wanted lambs to work, he would not give 5*s*. more for them because they were fat, and it must be remember ed that it was not all customers that wanted these fat lambs. As to buying and working fat rams, he must confess he had a great objection to these fat animals. He was fond of examining and admiring the different points of an animal, and in an anatomical point of view, it was impossible to say whether these points were good or symmetrical if the animal was fat. He believed that serious evils and losses accrued from persons not considering what they were about, when they gave great prices for fat rams. Rams might be compared to stallions, made fat for the purpose of disguise, and in order to deceive those who were not judges of the proper points of an animal. A flock-master should first consider what were the proper characters for sheep, and then select ewes having such characters, and endeavor to find rams to match; this was, in his opinion, far better than to make wide crosses.

New-York State Ag. Society.

From the report of the proceedings at the meeting of the Executive Committee, on the 9th of August, we give the following.

The Secretary reported, that he had been to Syracuse since the last meeting of the Board, and that in connexion with Col. Sherwood, Mr. Rust and Mr. Burnet, of the Executive Committee, the grounds were marked out, and the erections necessary for the show designated. The contractor, Col. Voorhies, with an efficient force was at work preparing the erections, and that every thing required for the Society would be in readiness previous to the time of meeting. The citizens of Syracuse were preparing for the reception of visitors, and every accommodation that the city could supply, both public and private, will be open for the entertainment of those in attendance at the show. The Horticultural Society of Syracuse are making arrangements for the suitable accommodation of the 'North American Pomological Convention.'

The assurances received from all parts of our own country, as well as the Canadas, are such as to render it probable that the coming exhibition will be one of the most extensive ever held by the Society.

The Secretary also reported that he had called upon the Hon. Henry Clay, of Kentucky, (now at Saratoga Springs,) and presented to him an invitation on behalf of the Executive Committee, to attend the annual meeting at Syracuse. Mr. Clay expressed himself highly gratified at the invitation, and said, that it would give him the greatest pleasure to be present at the meeting and witness, as he had long desired to do, the improvements of the farmers of New-York, as well as to meet the farmers themselves. He feared, however, that he might not be able to enjoy that pleasure, as his arrangements were such as to render a return to Kentucky in the forepart of September necessary. He desired to have communicated to the Executive Committee and to the Society, his best regards for their polite invitation, and an assurance that should it be at all consistent with his engagements, he would avail himself of the opportunity to attend the show.

The Secretary reported that a letter had been received from Prof. Johnston, that he should sail from Liverpool in the steamer of the 28th July, land at Halifax, and spend a short time in New Brunswick, where he had an engagement; and would arrive here in time for our annual show, and would spend in this State and vicinity the month of September. (Prof. J. arrived in the America.)

The Secretary presented the *Transactions* for 1848, which have been received, and are ready for distribution.

A letter from G. Elfentrez, Director of the Imperial Botanic Garden, at St. Petersburgh, Russia, acknowledging receipt of Transactions of the Society, with the thanks of the Directors, and also that the publications of the Imperial Society would be duly transmitted in exchange.

E. & T. Fairbanks & Co., St. Johnsbury, Vt. A platform scale No. 10, and druggists scale for the Museum of the Society, of very superior finish and workmanship.

C. D. Mynderse, Seneca Falls, writes. We had a beautiful time for haying and harvesting. We have secured a larger crop of hay than usual this season. Wheat is more or less injured by the wheat fly, some late pieces very much, otherwise wheat bids fair to yield a heavy return. The long continued drought, which has continued about six weeks, with but one or two slight showers, I am fearful will prove ruinous to the corn and potato crops as well as clover.

Geo. Warren, Albany. Kendall's Thermometer, for Museum, &c.

Hon. Ashbury Dickens, Secretary U. S. Senate. Third report of the Smithsonian Institution, made to the Senate of the United States.

Fine sample of the "Clump Spring Wheat," from J. McD. McIntyre's farm near this city. The heads are short, but remarkably well filled, and the grain very large.

Mr. Wilbur of Auburn, fine samples of winter Barley, raised by him the present season.

Hon. Anson Miller, of Rockford, Northern Illinois, informs us in relation to the wheat crop, that the wheat has been greatly injured by the rust. The winter wheat, especially, it is thought, will be nearly if not entirely destroyed. The malady, as is always the case, prevails more generally on the low, rich, sandy loam soils. We have heard no general complaint of this kind as yet, from the Pekatonic country, which has a strong clayey subsoil, and where winter wheat always succeeds if any where.

From J. Hall Maxwell, Secretary Highland Agricultural Society of Scotland. Proceedings of the half yearly meeting of the society.

Edward Bullen, Esq., Secretary Royal Agricultural Improvement Society of Ireland, 1 vol. Quarterly Journal of the Society for 1849; Premium List and Regulations of the Society, for their Annual Cattle Show for 1849; and Reports of the Practical Instructors in Husbandry in different districts in Ireland.

Mr. B. writes:—"It is my painful duty also, to inform you that affairs look more gloomy in this country every day. The prostration of all classes is increasing, and no one can see the least signs of reaction or improvement. With a dense and pauper population of eight millions, circumscribed within the limits of an island not larger than some of your middle-sized States, you may easily conceive the effects arising from the sudden as well as repeated destruction of its staple article of food. The consequence is, that the people have sunk under the pressure, and are directing themselves in one vast tide of emigration, to the shores of your more favored country, and projects are now on foot for carrying out the system on a much more systematic and extensive scale, than ever before was contemplated. I am aware that this great influx of persons, many of them in distressed and burthensome circumstances, must be a great source of inconvenience to those localities in which they first land, previous to locating themselves in the more remote districts; but that is a slight penalty for you to pay, considering the privations which have afflicted the countries of the old world, and this unfortunate one in particular, these few years back. I trust, therefore, that my poor countrymen will be received by yours with consideration, and that adequate encouragement will be made for pushing them on into the centre of the country, where, instead of being burthens and outcasts in their native land as at present, they may be.

come a source of wealth and prosperity to the land of their adoption."

Alexander Walsh.—This distinguished and ardent friend of Agriculture and Horticulture, died at his residence in Lansingburgh, on Saturday last, the 3d Aug., Mr. Walsh was one of the earliest members and promoters of this Society, and has ever been among its most efficient supporters. The Executive Committee, desirous of testifying their respect to one who for many years was an officer of the Society, and actively engaged in advancing its interests, have adopted the following preamble and resolutions:

Whereas intelligence has been received of the decease of Alexander Walsh, Esq., of Lansingburgh, one of the earliest friends and promoters of this Society, and for many years one of its officers, and ever an active and efficient friend of Agriculture: Therefore,

Resolved, That the Executive Committee have heard with deep regret of the decease of their respected friend, and that they deeply sympathise with the bereaved family in their affliction.

Resolved, That a copy of the above proceedings be enclosed to the family of the deceased, signed by the Secretary.

A draft of a memorial to the Legislature, on the subject of establishing an Agricultural College and Experimental Farm, was presented and adopted, and ordered printed for circulation.

The Executive Committee adjourned, to meet on Monday, the 10th of September, at 3 o'clock, P. M., at Rust's Hotel, Syracuse. B. P. Johnson, *Sec'y.*

Summer Fallows

Eds. Cultivator—I have been a reader of the Cultivator for years. In that time I have read several pieces discarding summer fallowing for wheat. The writers must either labor under a mistake, or the practical operation of farmers in this vicinity, (than which there is no better for wheat,) are altogether wrong. I admit that favored fields—favored with the application of all the manure of the farm—may produce a tolerable crop of wheat succeeding summer cropping; but I very much doubt the propriety of the wheat-grower adopting this method extensively. There are numerous objections that might be urged against this practice—such as requiring double the number of laborers on the farm—the necessity of a large amount of work being performed in a given time—together with the difficulties attending the vicissitudes of the season. Should the fall prove to be very dry the plowing could not be well done, and then the uncertainty of a quick germination, and a firm root-hold in the earth, which is requisite to ensure a good crop.

The advantages of summer fallows are, the plowing and subsequent cultivation of the land can be performed at leisure after the bustle and hurry of the spring work is over, which affords sufficient opportunity to extirpate that pest of the farmer the Canada thistle, which threatens, and unless checked, will obtain exclusive sway. By judicious cultivation, the fallow retains sufficient moisture when the season of sowing arrives, to produce a quick germination, and advance the future fall growth of the young plant.

I have had some experience in raising wheat by both methods, and the conclusion to which I have arrived is, that raising wheat after summer cropping, under favorable circumstances, and with favorable seasons, does very well; but the great and chief dependance of the farmer is from his fallows.

I venture the assertion that summer fallowing is essential to the successful cultivation of wheat, and when I say this, I think I am sustained in the position by three-fourths of the practical wheat-growers of the land. If any are of a contrary opinion I should be glad to hear from them. W. Ansley. *Rushville, Yates Co., N. Y.*

Farm Horses.

Eds. Cultivator—Having read with much interest various communications in "The Cultivator," respecting some of our most noted breeds of horses, I offer a brief description of a useful, and in this region very popular stock of agricultural and draught horses, which have sprung from a horse called Samson, imported by me from the south of England, in 1837. As some of them will probably be shown at our next State Fair at Syracuse, I thought a few lines by way of introduction might be useful.

Samson was selected from some of the best stock of farm horses in the county of Sussex, England, for the express purpose of giving more bone, muscle, and constitution, to the agricultural horses of America. How far he succeeded, his stock will show. They mostly inherit, in a great degree, the shape and disposition of the sire; but being bred from smaller mares, they do not equal him in size, though they are large enough for all ordinary purposes; being remarkably "compact," strong, and hardy, kind and true in harness, with as much spirit and action as is useful and pleasant in a work horse.

Old Samson was a perfect horse of his kind, of immense muscular power, 16 hands high, and weighed 1660 pounds. He died in the fall of 1845.

The young ones vary from 14 to 16 hands, and weigh from 1200 to 1500 pounds. They may be found from central New-York through the western counties, some in Michigan, Wisconsin and Illinois. Where best known they out-sell any other stock of horses for hard service. Several have been kept as Stallions, and are generally well patronised. Among others in this county, is one owned by Nottingham & Allen, of Palmyra, one by Wm. Swales, of Sodus, another by Z. Lane, of Lyons. In Ontario county, Rushmore, Brown and Bowers, have each one. In Monroe county, Jones and Reeves, one each. Heston's of Genesee county, Sybrant's of Niagara county, and others, would all pass as good horses in any farming district, and are particularly adapted to cross with the light-boned, high-blood stock of the Southern and Western States. John Robinson. *Palmyra, Wayne Co., August*, 1849.

Show of the Royal Agricultural Society.

The tenth show of this society took place at Norwich, in July last. The display of live stock was above that of an average of the Society's exhibitions, and that of implements considerably greater. The number of entries for stock was 624, and for implements 1880. The *Mark-Lane Express* remarks:

"As regards the exhibition of stock, taking it as a whole, we have difficulty in bringing ourselves to the conclusion that it reaches an average in point of quality. There were some animals of a very high order or merit, such as Mr. Booth's two short-horn cows, and Mr. Wilson's yearling heifer, an almost perfect animal. Mr. Quartly's Devon bull could scarcely be surpassed. The Hereford and Devon classes were more evenly good than the short-horns. The yearling classes of all were very promising. The show of Southdown sheep far exceeded that of former years; Mr. Jonas Webb was eminently successful, and deservedly so, having won the first and second prizes for shearling rams. It is said that the judges selected six rams out of the whole number exhibited, as being far superior to any others, and that they had some difficulty in deciding to which of these splended animals the prizes should be awarded. It turned out afterwards, that *the whole six* *were Mr. Jonas Webb's!* Mr. Fisher Hobbs, who appeared for the first time as a Southdown breeder, took the first prize for rams of any age. The show of pigs was not so varied as usual. It will be seen, however, that Mr. Hobb's improved Essex maintained their character, carrying off first prizes in two classes. Mr. Hobbs was very successful, carrying off more prizes than any other single individual. The implements were most numerous and varied, manifesting a continuous improvement in the manufacture."

State Fair.

There is every appearance that the approaching State Fair at Syracuse, will be fully attended, not only by our own farmers and citizens generally, but by numbers from the neighboring states and from the Canadas. It will have been seen by the doings of the Executive Committee, published in this number and in our last, that the most ample arrangements have been made for the exhibition. The particulars in regard to the premises, &c., can be learned from the printed catalogue of the society, to be had on application to the Secretary, B. P. Johnson, Esq., or they can be obtained at the business office of the society at Syracuse, after the first of September. The following regulations of the society should be observed:

The Executive Committee will meet on the show-ground on Tuesday the 11th at 12 o'clock, and the judges are requested to be present, as the vacancies will then be filled. This day (11th) will be devoted to examinations by the judges; and the grounds will not be opened, except to officers, guests, delegates, members, judges, and exhibitors. On Wednesday, 12th, the grounds will be open to the public, and continue open for two days.

The Annual Address by Prof. J. F. W. Johnston, of Durham, England, will be delivered on Thursday, 13th, at 3 o'clock P. M., on the show-ground.

Tickets will be furnished by the rail-road companies at half the usual rates, enabling visitors to return any time during the week of the show, and animals and articles for exhibition will be transported free, as heretofore.

Exhibitors of stock should give at least one week's notice of their intention to send stock, to the person at the station from which the stock is to be sent, viz: to E. Foster, Jr., rail-road office, Albany; L. R. Sargeant, Supt. Troy and Whitehall roads; G. W. Young, Supt. Schenectady; T. M. Francis, rail-road office, Utica; W. D. Stevens, Oswego; J. B. Dill, Auburn; John Fargo, Geneva; Joseph Alleyn, Rochester; M. Beach, Batavia; Wm. Wallace, Supt. Attica and Buffalo rail-road; P. N. Rust and J. B. Burnet, Syracuse.

Articles designed for exhibition should be carefully labelled with the owners' name and residence, and may be directed either to P. N. Rust, J. B. Burnet, Roger Billings, or B. F. Colvin, Syracuse.

Entries may be made at the office of the secretary at Rust's Hotel, Syracuse, and fees of membership paid *after* the first of September. On Monday the 10th of September, the business office will be opened on the show-grounds, and all entries must then be made there.

Sales of Stock will take place on Thursday the 13th. It is expected that there will be offered for sale, Short Horn cattle from the herd of Col. J. M. Sherwood and others; Herefords from Messrs. Bingham, of Vermont; Devons from Mr. Washbon, of Otsego county, and Mr. Blakeslee, of Connecticut; sheep from Messrs. Bingham, Blakeslee, Sherwood, and others; horses from Mr. Burnet and Mr. Thompson, of Syracuse, Mr. Blodgett and others, of Vermont. For particulars in regard to the stock offered by Messrs. Bingham, Blakeslee, and Blodgett, see their respective advertisements in this, and the last number of *The Cultivator*. There will be other stock, especially horses, from out of the state, which will be offered either for sale or exhibition. Mr. Wier, of Walpole, N. H., will be on the ground with the old Gifford Morgan Stallion. Mr. L. D. Harlow, of Hartland, Vt., will also be present with the Morgan horse Grey-Hawk.

We are authorised to state that articles, or stock intended for exhibition from Canada, will be admitted by way of Oswego free of duty.

The North American Pomological Convention will open its session on Friday morning, September 14th, at Rust's Hotel.

Prize Sheep.

Eds. Cultivator—I noticed, lately, a communication on the subject of Cotswold sheep, from a gentleman in Virginia, in which he says he imports sheep from England "every two years, and sometimes every year," when he "can get sheep that have taken the Queen's or Royal prizes." That, he considers the "severest ordeal for sheep to go through." His orders, he says, "are not limited in price," as he is "determined to import none but the best;" and as the "cost and risk are great," he "requires the Queen's prize sheep only."

Will this gentleman be so good as to inform the public what this "*Queen's prize*" is? By what association, or authority is it offered? J. P. R. *Montreal, C. E., August*, 1849.

Crops in Virginia.

The wheat harvest is ended; and with us, as well as other portions of the state which I have heard from, more than an average yield in quantity and quality may be expected—although it was much later than usual; increasing the chances thereby, in favor of its taking the rust, to which our late wheat is much subject.

The growing crop, and vegetation generally, owing to the cool and dry weather during the spring, is some two weeks later than common Indian corn is, the great favorite with our Virginia farmers and planters, and the tenacity with which they adhere to their opinions concerning it, and the exertion brought into requisition in cultivating it on their worn out lands, would lead any one to infer that it was rather an improver than an exhauster of soil. The present crop looks promising—though late; as the season has been quite unfavorable for it, having had great extremes of weather the whole season; and interrupted also by the clover worm, (supposed to be) an insect which preys upon the roots of the corn. The oat crop will not be an average one, and so in regard to the hay crop, though having had fine seasons lately, the second mowing may be better. J. A. *Long Hill, Amherst county, Va., July 20th*,

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The Wayne County, Pa., Agricultural Society will hold its annual show at Honesdale, Oct. 7. P. Bushnell, Esq., will please accept our thanks for the list of premiums, &c.

Hessian Fly and Good Wheat.—J. Oglesby, in the *Pennsylvania Cultivator*, states that he had a nine acre lot, from which he obtained 60 bushels of oats, the rest of the crop being briars, sumac, sassafras, Canada thistles, poke, elder, and nearly all other kinds of weeds. When the oats were harvested, the bushes were grubbed, and the weeds cut with a scythe. When perfectly dry, they were burned in a strong wind, as they lay over the ground. The nine acres then received 700 bushels of lime—the land was well plowed—and the next year it yielded 390 bushels of good wheat, untouched by the Hessian Fly, the fire having destroyed them.

Domestic Economy, Recipes, &c.

Currant Wine.—A palatable and wholesome wine—or at least useful "as a medicine," in many cases—may be made from the currant. We have, in former years, made wine from the red currant by the following recipe, which was considered of so fine a quality as to be ordered by the physicians for their patients, in preference to the imported kinds. Its cost was not over fifty cents per gallon. Though rather late in the season, we publish the recipe at the request of several correspondents.

To each gallon of clear juice was added two gallons of water, and to each gallon of the mixture was added three and a-half pounds of good brown sugar. After the sugar was dissolved, the liquor was put into good barrels, placed in the cellar; and when the fermentation had subsided, it was bunged tightly. In February, one gallon of the best fourth-proof brandy was added to the barrel. In May following, it was bottled. Like other wines, it improves with age.

White wine may be made with white currants, using the same proportion of white sugar as is named of brown, for the above—the liquor to be treated in the same way except that no brandy is added.

The following recipes are from Mrs. Rundell's "*Domestic Cookery*." Elder wine is considered an excellent remedy in influenza, sore throat, &c.; and black currant wine highly useful in "summer complaints," dysentery, &c.

Elder Wine.—To every quart of berries put two quarts of water, *boil* half an hour, run the liquor and break the fruit through a hair sieve; then to every quart of juice put three-quarters of a pound of Lisbon sugar, coarse, but not the very coarsest. Boil the whole a quarter of an hour, with some Jamaica peppers, ginger, and a few cloves. Pour it into a tub, and when of a proper warmth, into the barrel, with toast and yeast to work, which there is more difficulty to make it to do than most other liquors. When it ceases to hiss, put a quart of brandy to eight gallons, and stop up. Bottle in the spring or at Christmas. The liquor must be in a warm place to make it work.

Black Currant Wine.—To every three quarts of juice, put the same of water unboiled; and to every three quarts of the liquor, add three pounds of very pure moist sugar. Put it into a cask, reserving a little for filling up. Put the cask in a warm dry room, and the liquor will ferment of itself. Skim off the refuse, when the fermentation shall be over, and fill up with the reserved liquor. When it has ceased working, pour three quarts of brandy to forty quarts of wine. Bung it close for nine months, then bottle it, and drain the thick part through a jelly-bag until it be clear, and bottle that. Keep it ten or twelve months.

To Remove Marks from a Table.—If a whitish mark is left on a table, by carelessly setting on a pitcher of boiling water, or a hot dish, pour some lamp oil on the spot, and rub it hard with a soft cloth. Then pour on a little spirits of wine or Cologne water, and rub it dry with another cloth.—The white mark will thus disappear and look as well as ever.

Dryed Apples.—Some varieties being much more tender in their texture than others, dissimilar kinds should be kept separate, to prevent one portion stewing too much, while another remains hard.

Dried Peaches.—The following is said to be an excellent mode of drying peaches and plums. The fruit is first skinned by being placed a short time in a strong alkaline solution, (ley, or solution of potash,) the stones are then removed, and they are dried in a slow oven.

Preserving Apples.—It is asserted that plaster or gypsum, from its soft texture, and the compact, air-tight bed which it forms, is one of the best substances to envelope fruit for preserving. The saw-dust of the maple, which imparts no bad flavor, after being thoroughly dried by fire heat, has been found excellent for imbedding rare fruit, when kept in a dry cool place.

Making Vinegar.—Nearly every one knows that in the conversion of cider to vinegar, exposure to the air is essential. The more thorough this exposure, the more rapid will be the formation of the vinegar. The *Ohio Cultivator* says, "we have seen this effectually done by causing it to run slowly from a barrel placed up stairs, through an aperture in the floor and ceiling, on a loose pile of fine sticks or shavings below, through which the air could pass freely, then draining into a cask into the cellar."

Vinegar from Beets.—It is stated that the juice of one bushel of sugar beets, will make from five to six gallons of vinegar, by washing, grating, expressing, and exposing, two weeks to the air in the barrel, with a gauze-covered bung hole.

To Prepare Rennet.—Take a gallon of blood-warm water to each rennet; soak, after stirring, for 24 hours; strain the liquor and let it settle, saturate with salt, and skim off any scum.

Answers to Correspondents.

Cherry for a Name.—L. W., Middleburgh, Schohaire county, N. Y. The cherry sent appears to belong to the family of mazzards. You say it was a "sprout" from a tree brought from England by Sir William Johnson. If that tree was budded, it is probable the stock was a mazzard—as it is common to bud on such stocks—and hence your tree, being taken from the root, would produce the same kind as that stock, and not the kind which was budded on it.

Black Earth.—Z. S. C., Westhampton, Mass. If the black earth of which you speak, contains considerable vegetable matter, or partakes of the character of peat, it will pay the cost to make it into a compost with animal manure. Try plaster on your land, at the rate of a bushel or two bushels per acre.

White Thorn from Seed.—J. C., Brandon, Vt. We are not acquainted with any better way of raising this plant from seed, than to gather the haws in the fall when they are fully ripe, and plant them about two inches deep in any good loamy soil. All kinds of thorns are slow in germinating, and the plants do not all show themselves till the second summer after they are planted. If any of our friends know a better process than that mentioned, we would thank them to make it public.

Spaying Heifers.—A Young Farmer, Roswell, Ga. You will find full directions in regard to this operation in our August number.

Bone Dust.—J. R. S., Clarksville, Ga. Bones are ground in mills prepared for the purpose. They are ground to various degrees of fineness, as is desired.

Chinese Geese.—J. F. S., Weldon, North Carolina. Very fine geese of this kind can be had of Messrs. H. & A. Mesier, of Wappingers Creek, Dutchess county, N. Y., at $5 per pair. We do not know any reason why they would not do as well in your section as here. They are a very handsome and prolific kind, breeding twice and sometimes three times in a season.

Notes for the Month.

Communications have been received since our last, from Agricola, F. Holbrook, Lewis Sanders, Observer, Sydney Sinclair, John Robinson, L. Durand, A Gleaner of Agricultural Knowledge, Dean, S. W., John Conant, A Young Farmer, An Observer, A. S. Copeman, A. Stevens.

Acknowledgments.—"History of Chemical Investigation of Maize, or Indian Corn," by J. H. Salisbury—a *prize essay* of the New-York State Agricultural Society—from the author. The "Edinburgh Evening Courant," containing a notice of the doings of the Highland and Agricultural Society of Scotland, at its last half-yearly meeting—from an unknown friend. Transactions of the New-York State Agricultural Society for 1848, from B. P. Johnson, Esq., and C. Van Benthuysen, Esq.

Arrival of Prof. Johnston.—This gentleman arrived at Halifax, N. S., about the 10th of August. He is expected in Albany about the first of September, and will proceed to Syracuse in time for the delivery of the address at the State Fair.

School of Applied Chemistry.—We would call particular attention to the advertisement of this school, which will be found in our present number. The institution is under the direction of Professors Silliman and Norton—the latter having special charge of the agricultural department. Prof. Norton's writings on agricultural subjects are very extensively known, and are highly approved by our best practical farmers. The school has had many young farmers, as students, at former terms, and we have heard from them repeated expressions of gratification, in relation to the advantages of the instruction they had there received. It should be remembered that pupils can enter this school for a single term, or for several terms, just as they choose,—the school being open to all, whether students of the college or not.

Devon Cattle.—In the article on Devon cattle, published in our April number, (current volume) we mentioned some of the breeders of this stock in this country. The name of Mr. E. P. Beck, of Sheldon, Wyoming county, N. Y., should have been included. He has been many years engaged in breeding this kind of stock, and has shown some of the best animals we have ever seen of the breed. The two fine Devon bulls which received the first and second premiums at the State Fair at Buffalo, were of his breeding. We spoke particularly of these animals in our notes on the show, published in the October number, last year. There are other breeders of Devon's whose stock deserves notice, but for which we have not room at present. Mr. Cowles, of Farmington, Ct., it will be seen by his advertisement, offers for sale several of his fine herd.

☞ By Mr. Bement's advertisement, it will be seen that he is engaged in the preparation of various articles useful in household economy. We have tried his table salt, his ground rice, wheat grits, &c., and find them all first rate in their kind. His establishment is well worthy examination.

Early Orleans Plum.—We are indebted to Mr. Kirtland, of the Cantonment Farm, Greenbush, for handsome samples of this fine early variety of plum. They were ripe the first week in August.

Erratum.—In the article on Wood's Plow, in our July number, a typographical error escaped our notice till too late to rectify it, in which the cost of patterns was made incorrectly to read $15,000 instead of $1,500.

Death of Friends of Agriculture.—Since our last number went to press, we have received intelligence of the demise of several individuals prominent among the promoters of agricultural improvement, and who will long be missed in the circles in which they moved. Among these, we have before us the names of Elias Phinney, Esq., of Lexington, Mass.; Hon. Theodore Lyman, of Boston; Alexander Walsh, Esq., of Lansingburgh; Hon. E. Mack, of Ithaca; Dr. H. Gates, of St. Louis, Mo.

Our readers will find an interesting sketch of Mr. Phinney, written by our able correspondent, Mr. Holbrook, in this number.

Mr. Lyman was an ardent and efficient friend of agriculture and horticulture. He liberally endowed the "Farm School for Boys," at Westboro', Mass., and gave the sum of $10,000 to the Massachusetts Horticultural Society, besides making other munificent donations for similar purposes.

Mr. Walsh was one of the early supporters of the New York State Agricultural Society; was for several years a constant attendant at its meetings, and rendered valuable services in advancing its interests. The resolutions passed by the Executive Board in reference to his death, will be found on another page.

Mr. Mack was warmly devoted to the advancement of agriculture, in which he had for several years been practically engaged.

Dr. Gates was formerly editor of the *Iowa Farmers' Advocate*, and since the discontinuance of that paper, was senior editor of the *Valley Farmer*, published at St. Louis. He was an able writer, and in his death, the agricultural press has sustained a loss.

☞ Since the above was in type, we have heard, with deep regret, of the death of Col. Edmund Kirby, of Brownsville, Jefferson county, N. Y. He died at Avon Springs, on the 20th of August. He had been attached to the army since 1812, and for many years had served in the capacity of Pay-Master. He was a volunteer aid of Gen. Taylor, in the late war with Mexico. But though a soldier by profession, he was ardently devoted to the improvement of agriculture, and the development of all the resources of his state and country. He had been an active officer of the New-York State Agricultural Society, and at the time of his death, was one of the Commissioners appointed for preparing a plan for an Agricultural School.

Transactions of the New-York State Agricultural Society for 1848.—This volume contains an unusual amount of valuable information. It is considerably larger than any previously issued by the society, and comprises 975 pages. The principal increase of matter is in the form of essays and elaborate papers on various important subjects. Of this class we may mention the highly valuable essay on the "Analysis of Indian Corn," by Mr. J. H. Salisbury, and the first portion of the "Survey of Washington County," by Dr. Fitch. These two papers form 400 pages of the volume. There are many other valuable articles in the work, from some of which we have already given copious extracts. We copy in this number, as will be seen, the statement of Mr. Foster in regard to his farm, which received the first premium of the society for last year. In future numbers we shall have occasion to make further drafts on the volume, more especially in reference to the essay on Indian corn, which contains many useful facts not brought out by any previous investigation. We are indebted to Mr. Johnson, the Secretary of the Society, and also to Mr. C. Van Benthuysen, for copies of the work.

The Albany and Rensselaer Horticultural Society will hold its next exhibition at the Rooms of the New York State Agricultural Society, Albany, September 19th and 20th.

The Cotton Crop.—M. W. Philips, Esq., of Edwards, Miss., writes under date of July 29th last, that the cotton crop will be considerably deficient; that there had been a month of almost constant rain, and crops were injured in consequence. The corn crop, however, was expected to be good.

Transmutation.—The editor of the *Michigan Farmer* occupies *five pages* in two numbers of that paper, in advocacy of the hypothesis that wheat changes to chess. We have carefully read his remarks, but find no evidence or argument with which the public are not generally familiar—his main points having been fully discussed in the *Genesee Farmer*, sixteen years ago. He informs us, however, that he has "*scarcely yet entered upon the investigation of the subject.*" We know not, therefore, what is in reserve, but if anything of importance appears, will give our readers due notice. In the mean time we will inform the editor of the *M. F.*, that "the $100 premium," about which he inquired, *will be paid* whenever it is demonstrated that wheat turns to chess, or that both naturally grow from the same germ, or on the same stalk.

Gooseberries.—We are indebted to Mr. James Wilson, of this city, for fine specimens of the "Crown Bob" and "Roaring Lion" varieties of gooseberries.

Doyenne D'Ete Pear.—We have received a handsome sample of this pear from Dr. Herman Wendell, of this city. It is of good size, and has a beautiful mahogany color; with a flavor unsurpassed by any pear we have seen which ripens so early in the season—first week in August.

Wool.—An exchange paper states that the White River (Vt.) Wool Depot has received over sixty thousand pounds of wool this season.

Wool-Growing in Illinois.—According to the *Peoria Register*, there are 30,000 sheep in Illinois, yielding as an estimate, the present year, 90,000 pounds of wool. Bishop Chase, it is said, has a flock of 2,000; C. Stone a flock of the same size, and several others have flocks of 1,000 to 1,500, each.

Prices of Agricultural Products.

New-York, August 24, 1849.

FLOUR—Genesee, per bbl., $5.62½a$5.76—Michigan, $5 50a $5.56.

GRAIN—Wheat, Genesee, per bush., $1.25a$1.30—New Southern, $1.05a$1.25—Corn, Northern 63a64c.—Rye, 63a64c. Oats, 38 a40c.

BUTTER—best, per lb., wholesale, 19a21c.—western dairy, 12½ a14c.

CHEESE—per lb., 6a7c.

BEEF—Mess, per bbl., $13.50a$14.

PORK—Mess, per bbl., $10.75—Prime, $9.

LARD—per lb., 8a8½c.

HAMS—Smoked, per lb., 11c.

HOPS—per lb., first sort, 6a8c.

COTTON—Upland and Florida, per lb., 9a11½c.—New Orleans and Alabama, 9½a12½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	42a46c.
American full blood Merino,	36a40c.
" half blood do.,	32a35c.
" one-fourth blood and common,	29a31c.

Remarks.—The cotton market is rather heavy, though prices have as yet been fully maintained. For flour and meal the demand is rather moderate. In provisions the trade is fair. The wool market is firm at advanced prices.

Selling Off.

LINNÆAN BOTANIC GARDEN & NURSERY, late of Wm. Prince, deceased, *Flushing, L I, near New York.* Winter & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, the entire stock of this establishment, comprising every description including the newest and choicest varieties of

FRUIT AND ORNAMENTAL TREES,

Shrubs, vines, Plants, Roses, &c., will be disposed of at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of $10, or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by wholesale, will be supplied at such reduced prices according to kind and quantity, as will probably prove satisfactory to them.

Descriptive Catalogues gratis on application, post paid.

Sept. 1, 1849.—2t.

Mount Hope Garden and Nurseries.

Rochester, New-York.

THE proprietors invite the attention of *Fruit Growers, Nurserymen,* and *Dealers in Trees,* to their present stock now offered for sale.

By recent large importations, and an extensive scale of propagation, they have obtained a stock of nursery articles as complete as any in the country, and offer them now on the most liberal conditions.

The well known health, vigor and hardiness of the trees raised here, and the undivided and scrupulous attention given to every department by the proprietors in person, offer great inducements to purchasers.

Standard Fruit Trees.

Consisting of all the best varieties of Apple, Pear, Peach, Plum, Cherry, &c., of suitable size and age for orchard planting. The principal stock is made up of the well known leading sorts, but nearly all the new and rare American and Foreign varieties are on hand and can be furnished.

Pyramidal and Dwarf Trees,

Consisting of select varieties of Pears on Quince, Apples on Paradise, and Cherries on St. Lucie, or Mahaleb stocks, for gardens and limited grounds, and for nurserymen and others who desire to obtain fruit or test varieties quickly. Having given much special attention to this branch for many years, the stock of trees of this character, is probably the largest and best in the country.

Gooseberries, Raspberries, Currants, &c.

Of these, we have a large and complete assortment, and can supply them by the dozen, hundred or thousand, at low rates. The largest and finest English Gooseberries, cultivated and imported annually. All the new Currants can be supplied.

Ornamental Trees, Shrubs, Roses, &c.

Of these we can supply all the leading articles, such as Horse-chestnuts, Mountain Ash, Ailantus, Snowy Abele, Silver Maple, &c. by the 100 or 1000 much below ordinary rates. Besides all the popular shrubs and roses, and a large number of new and rare ones, recently imported

Hedge Plants.

Buck Thorn, 2 and 3 years old,
Honey Locust, " "
Osage Orange, 1 and 2 years old,
Privet and other Shrubs.

Evergreens.

Red Cedar, Norway Spruce, Hemlock, Arbor Vitæ, &c., suitable for hedges, can be furnished to any extent.

Stocks and Young Worked Trees.

Pear Seedlings, 1 and 2 years, transplanted,
Plum do 2 years,
Paradise stocks, for dwarf apples—fit for working,
Mazzard Cherry, do 1 yr. old, do do
St. Lucie or Mahaleb stocks, for dwarf cherries, do
Quince stocks, sort commonly used for pears, do

New Upright Quince.

A remarkaly free, erect grower—the best of all for Pear stocks. We can now supply these in moderate quantities

Young Worked Fruit Trees

For distant transportation. can be furnished to any extent, at very moderate prices.

Wholesale priced lists and general Catalogues sent gratis to all post-paid applications. ELLWANGER & BARRY.

Rochester, Sept 1, 1849.—1t.

Fruit Trees.

THE subscribers offer for sale this fall their usual assortment, viz: Apples, Plums, Pears, Cherries, Peaches, and Ornamental Trees.

The following Pears on the Quince.

Louise Bonne de Jersey,
Bartlett,
Virgalieu, (White and Gray,)
Onondaga, or Swan's Orange,
Duchesse d' Angouleme,
New Gray Winter Beurre,
Doyenne d' Ete, or Summer Virgalieu,
Columbia,
Bloodgood,
Vicar of Winkfield,
Beurre Diel,
Dearborn's Seedling,
Leon Le Clerc.

Also, a few hundreds of the European Mountain Ash, of an extra size. WILSON, THORBURN & TELLER,
Albany, Sept. 1.—3t. Nurserymen.

Fine Devon Cattle for Sale.

THE subscriber offers for sale a portion of his herd of pure Devon Cattle, as follows:—2 cows thorough bred, 7 and 8 years old, bred from stock imported by Richard Caton, of Baltimore, now in calf by my bull, *Young Eclipse;* sired by Mr. Patterson's imported bull *Eclipse.* Also, 2 or 3 heifers, 1 and 2 years old, and 5 bull calves, from 4 to 8 months old. All bred from choice stock.

WM. L. COWLES.

Farmington, Ct. Sept. 1, 1849.—1t.

Nurserymen's Agency,

145 Maiden Lane, New-York.

THE subscriber offers for sale,
40,000 Pear Stocks,
35,000 Quince do
50,000 Apple do
15,000 Plum do
20,000 Cherry do

Peruvian and Prepared Guano, Chemical manures, Bone dust, &c., all of the best quality, put up in packages of any size, as ordered.

Russia Mats,
Propagating Glasses—all sizes,
Flower pots, at manufacturer's prices.

My services are at command, for the purchase and sale of all descriptions of Nursery stock, and for receiving and forwarding goods, &c. &c.

GEO. G. SHEPPARD,
New-York, Sept. 1, 1849—1t. Horticultural Agency.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, at Plymouth, Mass., Pear, Quince, Cherry, Plum, Apple, Paradise and Mahaleb stocks, suitable for grafting in the Spring, and for budding the coming season. Mountain Ash, Elm, Spanish Chestnut, Ash, Maple, Lime, Alder, Larch, Scotch fir, Silver fir, Norway fir, Arbar Vitæ, Balsam fir. from 1 to 4 feet; Cedar of Lebanon, Araucaria imbricata, Deodar cedar, Oaks, Althæas, Hawthorns, Lilacs, Spiræas, Syringas, Deutzias, Acacias, Roses, Honeysuckles, Climbers &c. Raspberries, May's Victoria and other currants, Gooseberries, Native grapes, Foreign grapes in lots for vineries. Myatt's Victoria, Early Scarlet, and other rhubarbs. The best native and foreign *Pears*, 1 to 5 years from the bud, fine thrifty trees and well grown. 40 Select named Verbenas, all of Beck's Pelargoniums, in 23 varieties, including those of last season, being the finest Pelargoniums ever introduced.

Priced Catalogues sent on application.

Sept. 1, 1849.—3t. B. M. WATSON.

Nursery of J. J. Thomas,

Macedon, Wayne Co., N. Y.

THIS nursery now contains many thousand fine trees, of large, handsome and thrifty growth, consisting of Apples, Pears, Cherries, Peaches, Apricots, &c., and the smaller fruits, of the best standard sorts, and most of the finest new varieties; ☞ *in all cases they have been propagated for sale after being thoroughly proved in bearing.* ☜

The collection of APPLES, consisting of many thousand large trees, mostly 7 to 9 feet high, embraces the finest standard varieties, and nearly all the valuable new sorts.

Very fine pear seedlings, at $12 per 1000, two year old apple seedlings, at $5 per 1000, Horse chestnuts 1 to 2 ft high at $5 per 100, &c., &c.

When purchasers desire, selections of the best for affording a regular succession of fruit throughout the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y. Sept. 1.—2t.

Strawberry Plants.

THE subscriber offers to Nurserymen and others, requiring large quantities of Strawberry Plants, the following varieties. To those who buy to sell again, a discount will be made of 33 per cent.

Hovey's Seedlings,	per thousand.	$10 00
Crimson Cone,	do	10 00
Early Scarlet,	do	10 00
Boston Pine,	do	10 00
Burr's New Pine,	per hundred,	4 00

Plants will be ready for delivery by the middle of September.

Flushing, L. I., Sept. 1.—1t. G. W. HUNTSMAN.

Hamilton Nursery.

THE proprietor of this establishment confines himself wholly to the propagation of hardy Fruit Trees, all of which have been obtained from the most reliable sources, or cut from bearing trees of well known varieties. About sixty varieties of plums and a large quantity of the Apples have been proved on his own grounds, and all are cultivated with his own hands, assisted by his son, who is soon to assume a personal interest in the business. And all the cutting of buds or grafts, and the labeling of trees, with the oversight of taking up and packing, being done by him in person, he feels confident of being able to give as good satisfaction as to correctness, as can be given at any other nursery. The stock of apples is large, and embraces numerous varieties, so that the Fruit Grower and Amateur Horticulturist can each be supplied

A liberal discount to nurserymen and dealers in trees.

Seedling stocks of Apples and Plums for sale.

AGENTS.—Geo. G. Sheppard, 145 Maiden Lane, New-York, H. L. Stephens, Honesdale Pa., Wm. J. Hamilton, Ringwood, McHenry Co., Ill.

Catalogues sent gratis to all *post paid* applicants.

Canterbury, Orange Co, N. Y. CHARLES HAMILTON.
Sept 1.—2t.

JUST PUBLISHED,

BY DERBY, MILLER & CO., AUBURN,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A GREATLY enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain

THREE HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole making a handsome duodecimo volume, of over 400 pages, at the low price of One Dollar.

DERBY, MILLER & CO.
Auburn, Sept. 1, 1849.—1t.

John Mayher & Co.

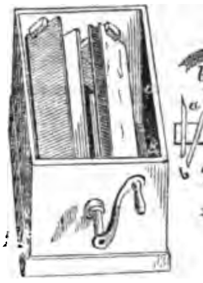
United States Agricultural Warehouse, 195 *Front, one door south of Fulton Street, New-York City,*

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds, and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J Mayher & Co's celebrated and unequalled First Premium Eagle D. Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Sept. 1, 1849.—tf.

Centrifugal and Centripetal Churn.



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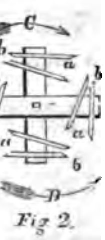

Fig 2.

AMONG the numerous inventions, &c. of the Churn, the annexed cut represents the only one which has thus far deserved an introduction. It is a recent invention, and for which letters patent have been granted It is made and offered the public on trial, with our best assurances of its giving satisfaction.

DESCRIPTION.—Fig. 1. The churn as it appears with the cover off. Fig 2 The head of the dasher or floats which is in one piece and can be instantly removed from the churn—and has no iron rod running through, as in most crank and cylinder churns.

When the crank is turned in the direction of the arrow, C. the cream is forced through between the three flat broad floats, passing in at *a*. and escaping at *b*. This process is continued until the butter forms into lumps so large as not to pass through. when the crank is reversed, thereby throwing all the milk, cream and butter into the middle of the churn—caused by the angular pitch of the inner float, thereby quickly gathering the whole mass into one roll of butter.

From the repeated trials had with it, and the uniform success attending its use, we do not hesitate to recommend it as being well worthy attention and trial.

Sizes and prices will be published in a succeeding No.—They will not exceed that of the common cylinder churn.

Albany Agricultural Warehouse,
369 & 371 Broadway, Albany.
Sept. 1. H L. EMERY.

A Small Farm Wanted.

A Letter addressed to C. S, Newport, N. Y., will receive attention.

August 1.—2t. *

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated Northern Spy, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*, the *Ladies' Sweeting*, *Peck's Pleasant*, *Swaar*, *Baldwin*, *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*, and *Van Mon's Leon Le Clerc*. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

THE HORTICULTURIST,

AND

Journal of Rural Art and Rural Taste.

EDITED BY A. J. DOWNING,

Author of "Fruits and Fruit Trees of America," "Landscape Gardening," "Cottage Residences," &c., &c.

THE first number of the fourth volume of this work, was issued on the 1st of this month (July,) and the future numbers will be issued regularly on the first of each successive month. It is devoted,

1. *To* Gardening, *in a thoroughly practical as well as scientific sense.*
2. *To the* Description *and* Cultivation *of Fruit Trees.*
3. *To Gardening as an* Art of Taste, *embracing essays, hints and designs on Ornamental and Landscape Gardening.*
4. *To* Rural Architecture, *including designs for Rural Cottages and Villas, Farm Houses, Gates, Lodges, Ice Houses, Vineries, &c., &c.*

In short, this periodical may be considered a continuation of the various works on Rural Subjects, by its Editor, which have already been so favorably received by the public. It is now his object to assist, as far as possible, in giving additional impulse to the progress of Horticulture, and the tasteful in Rural Life; subjects now so largely occupying all those interested in country pursuits.

All readers who have the least interest in rural affairs, should take a work which is exerting such a manifest influence upon the taste of the country. Its valuable correspondence furnishes from time to time the fruits of the experience of our most intelligent cultivators, and it is scarcely necessary to repeat, that Mr. Downing's labors in the department of Rural Architecture and embellishment give him substantial claims to public respect Their effects are already seen in every part of the country, in improved cottages, gardens, green-houses, pleasure-grounds, fencing, &c. The present number opens with some capital suggestions concerning the improvement of Country Villages.—*Newark Daily Advertiser.*

Terms—Three Dollars per vol. or year. Two copies for $5—in advance.

☞ The back vols. can be furnished to new subscribers.

☞ All business letters to be addressed to the Proprietor, LUTHER TUCKER, Albany N. Y., and all communications to the Editor, A. J. DOWNING, Newburgh, N. Y.

Saxon Sheep.

THE subscribers having disposed of their pasture lands, now offer their entire flock for sale. They will also offer about 70 Bucks and Buck Lambs at auction, at Syracuse, on Wednesday or Thursday, the 12th or 13th of September next, on the grounds of the State Fair. Of time, due notice will be given

New Lebanon, N. Y., July 12, 1849. TILDEN & CO.

We refer to,
H. Blanchard & Co., Kinderhook Wool Depot.
Samuel Lawrence, Esq., Lowell.
Sanford Howard, Esq., Albany.
August 1.—2t.

Sale of Hereford Cattle.

THE Messrs. Bingham, of Vermont—brothers—propose to sell at public auction, on the Show Ground of the New-York State Fair at Syracuse, from ten to twenty head of Hereford Cattle, 3 years old and under—bulls and heifers. Our cattle—Herefords—to found our herd, were purchased of Messrs. Corning and Sotham, about three years ago. We have been disposed to give these cattle a fair trial, to see what their merits would prove to be, before offering them to the public. We have come to the conclusion that no race of cattle can compete with them when all their good qualities are taken into consideration. We are resolved to push ahead in the cultivation of the Herefords, as being a race, affording the best profits for keep and care, and proving themselves first class cattle for all the purposes of the breeder. They make a noble cross with the Durhams or their grades, as well as with the native stock, showing a great and decided improvement. We offer these cattle to the public with the strong conviction that they will prove a desirable acquisition to any herd.

PURE BRED MERINO SHEEP.

We shall also offer at private sale, a large lot of pure bred Merino Sheep, from imported sires. The breeders of sheep will do well to look over our flocks, before purchasing elsewhere. We sell no mongrels, or grades, or worthless sheep for great prices;—but we mean to deal fairly with those who purchase of us, and sell them our best blooded sheep, at fair remunerating prices—so that they shall prove a decided improvement to the flocks with which they may be placed.

August 1.—2t.

Hereford Bull.

FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sotham, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State. J. P. FAIRBANKS.

St. Johnsbury, Vt., Aug. 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled the more so, as its manufacture is not of the most agreeable kind and withal, troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further, the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf GEO. BOMMER, Director.

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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School of Applied Chemistry,

Yale College, New Haven, Ct.

B. SILLIMAN, Jr., Professor of Chemistry applied to the Arts.
J. P. NORTON, Professor of Agricultural Chemistry.

THE Laboratory in this department is open during nine months in the year for instruction in the analysis of soils, minerals, ores, &c.

During the summer and autumn terms, there will be lectures on Mineralogy, Geology, Natural Philosophy, Elementary Chemistry, and other useful branches of Natural History.

The annual course of lectures on Agricultural Chemistry, by Prof. NORTON, will commence soon after the middle of January, and continue till about the first of April, at the rate of four or five lectures in each week.

These lectures are intended to be delivered in a form quite intelligible to those who never turned their attention to chemical studies. The great principles of Improved Agriculture will be illustrated and explained during the progress of this course in such a manner as to be understood by all. Tickets for the course $10.

Students in the laboratory have glass, chemicals, balances, and other apparatus furnished, and pay $20 per month. Analyses of minerals, soils, &c., made on reasonable terms.

For further particulars apply to either of the Professors.

New-Haven, Ct., Sept. 1, 1849.—5t.

Farm School.

THE *Mount Airy Agricultural Institute* will commence its winter session on the first Thursday of October next.

The course of instruction pursued is such as to insure to the student a thorough knowledge of the *Natural Sciences*; collateral with a full practical course on the farm, in all the labor of which the students participate.

For further particulars address the Principal.

JOHN WILKINSON,
Sept. 1, 1849.—2t. *Germantown, Pa.*

Albany Steam Mill.

THE subscriber begs leave to announce to his friends and the public, that he has opened a store, No. 9 Hudson street, for the sale of Flour, &c. Having erected a Steam Mill on the premises, enables him to furnish the following articles, fresh ground, at all times, viz: Graham, Rye, Buckwheat and Rice Flour. Wheat Grits, Farina, Pearl Barley, Split Peas, Corn meal and Hominy of all sizes, from North Carolina and Northern corn. Also, a very superior article of steam refined Table and Dairy Salt. A share of patronage is earnestly solicited.

C. N. BEMENT
Albany, Sept. 1, 1849.—1t.

White Dorkings.

THE subscriber has on hand, a few choice White Dorking fowls which he will sell at fair prices—bred by himself. As far as his knowledge goes, this variety of the Dorkings is more sought after, both in England and in this country, on account of their color.

L. DURAND.
Derby, Ct., Sept. 1, 1849.—3t.*

Allen's Improved Railroad Horse Power, &c.

GENTLEMEN—In reference to H. L. EMERY's advertisement page 264 of the last number of *The Cultivator*, we can only say, that we think our Railroad Horse Power, Overshot Thresher and Separator quite equal in the principles of its movement to Wheeler's, and stronger and better made than any ever manufactured by its patentee. And furthermore, we are willing to refer the merits of the two machines to the decision of any disinterested committee of mechanics and farmers to decide the question.

We have never sold our machines except upon their own merits, and at the same time stating distinctly to the purchasers what they were; we have also done the same by Wheeler's, and still do so. If H. L. Emery means in his advertisement that we have done the contrary, he asserts what is untrue. We utterly scorn any thing of the kind. Very respectfully yours.

A. B. ALLEN & CO.,
189 & 191 Water street, New York.
To the Editors of The Cultivator, *Albany, N. Y.*
Sept 1, 1849—1t.

Wheelers's Patent Railroad Horse Powers and Threshing Machines.

THE subscribers having been appointed agents for selling the above celebrated machines for the city and vicinity of New-York, in place of A. B. Allen & Co., (who have heretofore had the sale of the same,) they solicit the attention of those wishing to purchase.

☞ The farmers of Long Island can be supplied with a machine equally well adapted for their use, and which is afforded at the same prices, without any extra charge for premiums or Patent rights. All are warranted to give satisfaction, or are subject to be returned and the full purchase money refunded. A supply constantly on hand at their Warehouses, Nos. 187 Water Street and 195 Front St., New-York. JOHN MAYHER & CO.

Sept 1.—tf.

Mediterranean Wheat.

200 BUSHELS of this variety of Wheat for sale, being a portion of an excellent crop of Winter Wheat, raised for the fifth year on the same farm in Greene county, N. Y.

It is two weeks earlier than the Hutchinson wheat, and is always harvested before the Rye crop is ready for the sickle. This season it has done better than heretofore, notwithstanding it has improved in quality and yield.

The grain is large, of light color, and weighs, (this crop through) 64 pounds per bushel. It has never been affected by the Weevil, (or wheat midge,) Fly or Rust. This season, the yield was 23 bushels to each bushel sown.

For sale at the Albany Agricultural Warehouse & Seed Store,
Nos. 369 and 371 Broadway, Albany, N. Y.
Sept. 1—3t. By HORACE L. EMERY.

Horses for the State Fair.

IT is my present intention to visit the Agricultural State Fair, to be held at Syracuse, on the 11th, 12th and 13th days of September next, and take with me for exhibition, my Morgan stallion, a colt of the old Gifford Morgan, 6 years old, chestnut color, very closely resembling his sire. Also, one or two brood mares of the Morgan stock. C. BLODGETT.

Chelsea, Vt., Sept. 1, 1849.—1t.*

Merino Sheep and Devon Cattle.

THE subscriber will offer for sale at the New-York State Fair, at Syracuse, about 100 rams, of pure Merino blood—all bred by himself. Also, several head of Devon cattle—bulls, cows, and heifers. JACOB N. BLAKESLEE.

Watertown, Ct., Sept. 1.—1t.

Devon Cattle for Sale.

I OFFER for sale, a Devon bull and cow, four years old, from the celebrated herd of George Patterson, Esq., of Maryland. Finer specimens cannot, probably, be found anywhere—certainly not in the West. I will sell them, here, at the same price Mr. Patterson asks for similar stock at his farm in Maryland. The cow has a bull calf by her side. ISAAC DILLON.

Zanesville, Ohio, Sept. 1, 1849.—1t.*

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

New Series. ALBANY, OCTOBER, 1849. Vol. VI.—No. 10.

Practical Husbandry.

Farming on Long Island.

Local circumstances must always have an influence on the course or system of farming adopted in any particular district. The relative demand and value of products, together with the facilities for production, must govern the farmer in the selection of crops for cultivation. The near proximity of large cities and towns, may render it profitable to cultivate articles, which, in neighborhoods remote from market, would be comparatively valueless. The rapid increase of consumers of agricultural products, in some parts of our country, is constantly changing or modifying the course of farming in these sections; and this influence is being more and more extended with the extension of the means of rapid and easy communication with the interior. Perhaps there is no part of the country which has been more affected by the late great improvements in intercommunication, than a large portion of Long Island. A view of the mode of farming now practiced in one of the most important counties of that section, is admirably given in an address delivered before the Queens County Agricultural Society, by Hon. John A. King, President of that Society, and now President of the New-York State Agricultural Society. We think our readers will be interested with Mr. K.'s remarks. Eds.

General History of the County.—I propose, in the remarks I am about to make, to depart somewhat from the course which has been usually adopted by those who have addressed this Society, and instead of treating of the subject of agriculture generally, I propose to confine what I have to say, principally to the county of Queens, the middle county of the Island upon which we live. Before, however, I enter upon the character of its soil, the course of tillage, and the application of manures to its varied crops, I would for a moment digress, and give a brief account of the position, settlement and climate of Queens county, stating at the same time, that most of the information and facts relating to these questions, are derived from the several histories of Long Island, and from the recent Geological Survey of the same, under the authority of the State, by Wm. W. Mather. Long Island then, by its position, its climate, the character of its soil, and the thrift and industry of its inhabitants, is a remarkable portion of the State of New-York. It lies on its southern extremity, between the 40th and 41st degrees of north latitude, and forms, with the Island of Manhattan, Staten Island and the Jersey shore, the noble harbor of New-York. It is in length, from Fort Hamilton, at the Narrows, to Montauk Point, about one hundred and forty miles; and from the Narrows to Peconic Bay, a distance of ninety miles, it varies in breadth from 12 to 20 miles. The first successful attempt by the English to settle Queens county, was made in the town of Hempstead, in 1643, by emigrants from New England, at whose head was the Rev. Richard Denton. Flushing was settled in 1645, under Thomas Farrington and others. Newtown by Englishmen in 1651, where the present village now stands; and the first patent or ground brief, was granted in 1652, by Governor Stuyvesant. Thomas Stevenson and his associates were among its first settlers. The first plantation in Oysterbay, was commenced on the site of the present village of that name in 1653, by Englishmen, and the first deed from the Indians for land in that town, was made in 1653, to Peter Wright and others. Jamaica followed in 1656, upon the application of Robert Jackson and others from Hempstead. Robert Coe and his associates signed the first certificate of purchase Nov. 25th, 1656, for the settlement near the Beaver Pond, under a purchase from the Indians, and a grant from the Governor and Council of 21st March, 1656. North Hempstead was originally a part of Hempstead, and has no distinct records earlier than the year 1784. A settlement was attempted, at what is now Manhassett, in 1640, by a company of emigrants from Lynn in Massachusetts, but was broken up by the Dutch Governor Kieft. It will be perceived from the above statement, that the county of Queens is among the earliest settlements in the State of New-York. Its length from east to west is 26 miles, its breadth from north to south about 16 miles, making its whole area or surface 396 square miles, or 250,000 acres.

The influence of the ocean, which bounds it on the south and east, mitigates and tempers, both in winter and summer, the cold and the heat; so that the thermometer rarely falls below zero, or rises above 90. Of the 250,000 acres, the area of its surface, about 25,000 are salt meadow, and 25,000 plain and common lands, leaving 200,000 acres of land for cultivation, improvement or in wood. Its present population may be estimated at 32,000; and the assessment roll of its real and personal property, reaches nearly $12,000,000. Considering, then, the agricultural character of its inhabitants, their numbers, the size of the county, one of the smallest in the State, yet, the value of its land, and prosperity of its farmers, place it, in point of taxable property, the sixth or seventh in the State. Large as is this amount of property, in a county of such limited extent, and whose population is almost exclusively agricultural; yet I think it can be clearly shown that a full remuneration for the capital and labor expended in the cultivation of its soil, is annually received, and is many instances profitably invested, and that this steady return and increase, is as much due to the thrift and industry of those who till the soil, as to the character of that soil, and the variety of its products. A ridge or chain of hills commencing in Kings county, and extending nearly to Oyster Pond Point, on the northern fork of the Island, and rising in one or two places, to nearly 400 feet in height, divides the county into nearly equal parts. On the north side of this ridge, the land is often rough and broken, except where it stretches in necks and headlands into the Sound, while the surface on the south side is nearly a plain, without rock or stone of any size. The soil of the Island, and of this county, has as much variety as its surface. Near the Sound, the land is hilly and uneven; the greater portion however, is either level or slightly undulating. The necks and headlands have generally a rolling surface, and a deep loamy soil slightly mixed with sand. On the south side of the hills, the surface is flat and the soil sandy, mingled in many places with loam and clay. The more elevated land is, in soil, superior to that of the plains, and better adapted to the growth of the grains usually raised in this climate. There are large tracts of land and woodland in the centre of the Island, which, until recently, have remained without any attempt to reduce them to cultivation. In this county we have a large body of land principally belonging to the town of Hempstead, which still lies in common, but is susceptible of being easily and profitably tilled, notwithstanding an immediate and considerable outlay is required for fences and manures. Kings county contains very little waste land, and is in the aggregate, more fertile than any equal portion of the Island. Perhaps this is, in a great degree, to be accounted for, as much from the excellence of the soil, as from its proximity to the cities of Brooklyn and New-York, from whence manures of various kinds can be more cheaply and easily procured.

System of Husbandry.—With these preliminary remarks respecting the general features of the Island, and the county of Queens, which I trust may not be deemed inappropriate to the subject in hand, I will proceed to describe in the best way I can, the system of husbandry, which is pursued in this county. It must be in the recollection of many, who are here present to-day, that the general course of cultivation was formerly, in many essential particulars, different from its present practice. Before the Erie canal was completed, wheat, and barley, and rye, were largely raised for sale, and the flouring mills on the Island had as much business as they could attend to; the quality of the grain raised was excellent, and the reputation of the mills on the north shore was well established for the quality of their flour. The construction of that great work of internal improvement, very soon caused a radical change in the husbandry and crops of the county. We could no longer compete with the rich and virgin lands of the west, in the production of the cereal grains; and it was at one moment feared that the value of our lands, and the prosperity of our farmers, would be seriously affected by the cheapness, fertility, and great extent of the western lands. Such, however, was not the case. The effect of opening the Erie canal, was, it is true, to bring the crops of the West into immediate competition with those of the older parts of the State, which, so far, had enjoyed a monopoly: and at the same time to force those sections, particularly those near to the city of New-York (for as yet, Brooklyn was only a village) to change their system of husbandry, and the course and character of their crops. And the farmers of the western part of Long Island, with that unerring sagacity which interest always prompts, quickly adapted the cultivation, and the crops, to the new and more extended demand which the increasing and varied wants of a great and rapidly growing city could not fail to produce. The natural and predicted consequence of the opening of the Erie canal, was first to enlarge and enrich the city of New-York, by pouring into her warehouses, for consumption and export, the immense and increasing harvests of the unlimited West; still to be multiplied as they have been, year by year, until by new and improved channels of communication, the borders of all the great Lakes now receive and distribute the overflowing productions of regions as vast, and as fertile, as the sun in its daily course, blesses with its glorious beams. The greater part of this annual tribute of Agricultural wealth, finds its way to the noble seaport of our State—the great commercial mart of the Western continent; thence to be distributed among those Atlantic States whose productions are of a different character; and also, among the countries of the world, in exchange for the productions and the fabrics of their skill. The result and effect of these new and varied elements of wealth poured into the city of New-York, was immediately felt, in the extension of her commerce, the increase of her population, and in the enlargement and improvement of the city itself. This impulse, so powerfully felt by the city, was soon communicated to the surrounding country, and as the number and means of the citizens increased, the demand for those productions which the farmers in its neighborhood could alone most easily and profitably supply, was soon greatly augmented. Hence, as the growth of New-York, and subsequently of Brooklyn, continued to increase from the causes above alluded to, it followed as a consequence of so many being devoted exclusively to the commerce and the trades connected with it—and all consumers of what another class could alone produce—that the lands in the immediate vicinity of these cities must advance in value—first, for the erections of houses and buildings, and next for the cultivation and supply of those articles most needed from day to day for the consumption and support of two large cities. And such must continue to be the course of improvement, and the increasing value of the lands in the western part of this Island, as the cities of New-York and Brooklyn shall continue to prosper and augment. The system of husbandry in this part of the Island, and reaching to the eastern towns of Queens county, has, as was before stated, and as a natural consequence of our position and soil, undergone a great change in the character and value of its productions. Formerly wheat, rye, oats and corn, were the staple crops, and to a certain extent, some of them still continue of that character. Now, it may be said that wheat, and rye, and barley, are no longer raised as staple crops, nor to the extent of former years. But corn, and oats, and hay, are now the main and, as farming crops, perhaps the most productive and the most relied on. Potatoes, cabbage, peas, beans, asparagus, tomatoes, and other vegetables, in those parts of the county most conveniently situated for that purpose, have been largely cultivated for market, and two crops are now not unfrequently taken during the same season, from the same piece of ground; thus bringing a double return to the farmer for his labor and expense. On the south side of the Island, where the soil is light, sandy and warm, all the early vegetables and small fruits have, with the aid of ashes and manure, been grown with great success and advantage. And there, too, within a few years, large orchards of peach trees have been planted, whose fruit has been abundant, fair, and finding a ready market; while the stronger and more loamy soils in the centre, and on the necks and headlands of the north side, have, by a similar process of high cultivation, been rendered productive of the finest crops of corn, oats and hay; and where lands are finally laid down to grass, of excellent crops of wheat, rye and barley. But it should always be remembered, that while on the one hand, the nearness of a great and steady market has afforded the inducement, and stimulated the exertions of the farmers of the western part of the Island; yet on the other hand, they with great sagacity and persevering industry, have been quite equal to the new system of husbandry, which in so many instances they have been called upon to enter into. And that though prudent and saving in all other matters, they have learned the wise lesson, that it is not for their interest to starve the land. It

It has been truly said, you cannot cheat the land, for it will reproach you if you do. Another maxim, which I believe is held for truth among us, is, that the more generously you treat the land, the more abundantly it will repay the outlay.

ROTATION OF CROPS AND MANURES.—I will now proceed to say a few words upon the general rotation of crops on regular farming lands, and the application of manures to the various crops, as they come in their assigned order, from my own observation, as well as from the report of others. It may be stated that the lands in Queens county, as a general rule, are broken up every five or seven years; that corn, one of the surest crops, succeeded by oats, are the two fallow crops, and that the land is then laid down with wheat, rye or barley, and the grass seeds. It is mowed two or three years, and pastured afterwards, until it is time to repeat the same process. The manner of applying manure, ashes, lime, &c., which are those chiefly relied upon, and used in the cultivation of the various crops—(though guano bone and fish have their advocates) depends, as to their quantity, upon the condition and character of the soil, and the nature of the crop to be cultivated. While nearly all the straw, and more than half the hay, is carried off the farm and sold, and their place only measurably supplied by salt and sedge hay, the quantity of manure made in the barn-yard, must necessarily be much diminished, and its deficiency supplied, if the system of frequent cropping is carried on, from other sources. Hence Long Island, in all its length and breadth, particularly in its western counties, depends essentially upon a supply of the richest manures, from the cities and towns on the North and East Rivers, which is brought by water and railway to the nearest points where it is required; and the farmers of this county proceed, and have proceeded for years, upon the principle that it is better and more profitable to sell the corn and oats, the straw and the hay, for cash in the market, and with it, to purchase the manures required for the growth of their crops, and the maintenance of their farms in good condition.

In breaking up the land for corn, they do best who plow in the fall, and cross-plow in the spring, spreading the whole ground with such manure as they may have, and then adding at the time of planting in the hill, half a shovel full of well-rotted manure. By this process a quick start is given to the plant, leaving it afterwards to draw its support from the soil around, in which the long manure is slowly decomposed, and continues to supply nourishment to the plant during the period of its growth. Others manure the corn in the hill only, and sometimes, when it is up, and of sufficient size, strew a little leached or other ashes, around the young plant. As it is a certain, so it is a general crop, yielding, according to cultivation and manure, from twenty to eighty bushels per acre. For oats, it is not usual to give any manure; sometimes, however, ashes are applied, where the nature of the soil is supposed to require it. But usually it is a crop which is grown free from any other charge, than putting the ground in good condition by the plow, and an early sowing of the seed. As soon as the oats are cradled, or as soon thereafter as the ground will admit of it, the land is slightly plowed, so as to cover the stubble sufficiently, in which state it remains until it is time to mark it out, and cart on the manure and ashes, as both are frequently applied together where the character of the soil would seem to indicate the propriety and advantage of their joint use. The quantity of manure, and of the best quality, which at this time is put upon each acre, will vary from 30 to 40 cart loads; with an addition sometimes of 100 bushels of ashes. Between the end of September, and the first ten days of October, the wheat is sown at the rate of two bushels an acre, with from six to eight quarts of timothy seed; and as early in the spring as the state of the weather and of the ground will admit, about eight or ten pounds of clover seed are sown per acre. From land thus laid down, if the season is favorable, from twenty to twenty-five, and in some instances, thirty bushels of good wheat will be harvested; of rye, from twenty-five to thirty bushels; of barley, from 40 to 50 bushels. If the grass seeds take well, from two to two and a-half tons of hay may be cut on the ensuing year. The labor of tillage in this county is, generally speaking, comparatively light, and hence a less number of animals are needed for the purposes of a farm. A pair of horses, mules, or cattle, have, with some few exceptions, power enough to turn up the sod with ease, and to prepare the land for a crop. And with the aid of the same horses and mules, where the farm is near enough to the cities the farmer is enabled himself to transport his produce in wagons or carts to a ready and a cash market. So far as my own experience and observation can be relied on, and they are sustained by the opinion of many practical agriculturists, deep plowing for corn and potatoes, where the land will admit of it, is a practice which if more frequently followed, would well repay the farmer. But if you plow deeply, you should manure generously, and by the aid of both you will increase the depth and excellence of the soil, in which the roots of plants will find room to spread, and find protection from the extremes of heat and cold. The amount, the variety, and the value of the productions of Queens county, can only be estimated and measured by the census of 1840; the only means at this time within our reach for such a purpose. By the returns of that census, the number of improved acres of land in the county was 125,636, of which there were in grain 49,906, and in meadow and pasture, 73,710, whose annual products of all kinds reached the value of $1,764,604; agreeably to a statement and calculation, which will be found in a note below.*

There is another source of profit, which I must not omit on this occasion, and in connection with the foregoing statement. It is the large and valuable nurseries, and horticultural and botanical establishments, which for so many years have given celebrity to the county, as well as to their enterprising and intelligent proprietors; who cultivate about 200 acres, on which nearly 2,000,000 trees are supposed to stand.

The above sum of $1,764,605, the gross value of

	Acres.	In Grain.	Meadow & Pasture
* Newtown,	12,397	5,403	6,994
Jamaica,	11,098	4,106	6,992
Flushing,	11,668	4,541	6,127
North Hempstead,	23,580	11,791	10,789
Oysterbay,	35,995	10,192	25,803
Hempstead,	29,878	12,873	17,005
	125,636	49,906	73,710

	Acres.	Total bu.	Bu. pr. acre.		Value.
In Wheat,	4,464	99,374	22	at 10s.	$124,217
Corn,	17,228	440,200	25	5s.	275,125
Oats,	12,148	323,824	27	3s.	121,434
Potatoes,	2,436	229,966	95	4s.	114,983
Rye,	5,610	61,692	11	5s.	38,559
Buckwheat,	4,417	67,567	15	4s.	33,783
Peas,	617	38,249	62	4s.	38,214
Beans,	299	26,796	90	8s.	26,796
Of the 75,000 acres in meadow and pasture, two-fifths, or 30,000 acres, may be set down as mowing ground, yielding, one year with another, one and a-half tons of hay, or 45,000 tons, at $12.50 per ton, is,					572,500
Wheat and Rye straw, one-half the value of the grain,					82,000
Salt and sedge hay, at one-fifth the value of English hay					112,000
Oat straw, corn tops and bottoms, 40,000 loads at $1.50,					60,000
Cabbages, asparagus, and other vegetables, and small fruit,					50,000
Pork, poultry, lambs, veal, eggs, butter, milk, cord wood, and locust timber,					125,000
					$1,764,604

the annual productions of the country, is now to be diminished by the cost of labor and manure, and the wear and tear, as follows:

To the value of the real estate,..........	$7,500,000
Deducting for villages and their buildings,	1,000,000
	$6,500,000
Add to the personal estate, for stock, farming implements, wagons, carts, &c.,....	1,500,000
	$8,000,000

The balance of personal estate, $3,000,000, being at interest, or variously invested.

Deduct, for labor on 50,000 acres arable land, at $6 per acre,..	$300,000	
And on 30,000 acres meadow or mowing land, at $3 per acre,	90,000	
For manures made and purchased, the one being equal to the other, as will be shown,.....	454,000	
For wear and tear,............	80,000	
		924,000
Nett receipt,..........................		$840,605

Or more than 10 per cent. on $8,000,000 of agricultural capital; or $7 nett per acre on 125,000 acres improved lands, and $17 nett per acre on the 50,000 acres of arable land.

The average size of the farms will scarcely reach eighty acres, and the average value of all the lands in the county, 250,000 acres, is agreeably to the assessment roll, $30; of the improved land, 125,000 acres, $60 per acre; of the number of acres returned for taxation, 170,000, $47 per acre. The number of acres of improved land in the state is 12,000,000. Its hay crop is 3,000,000 tons, or rather more than one-quarter of the whole hay crop of the United States. In the year 1825, the Erie canal was completed. At that time the population of the city of New-York was 166,000, and the value of her real and personal property, $100,000,000. Then the county of Queens had 20,000 inhabitants, and an assessment roll of less than $6,000,000. In 1848, the city of New-York had a population of more than 400,000, and an assessment roll of $250,000,000; and the county of Queens, a population of 32,000, and an assessment roll of nearly $12,000,000. It is thus, I think, clearly shown, that the growth and influence of great cities, and the congregation of great numbers who are not producers, but must be fed, ever has been, and ever will be the source of increased value to the lands within a reasonable distance, and of profit and emolument to those who are owners or tillers of the same.

Annual Expenditure for Manure.—It remains now to be shown what sums are annually spent independently of labor, for the manures, ashes, lime, &c. An attempt has been made to form an estimate which should be safe, upon this subject, and some pains have been taken to get at the details, in which I have been aided by several intelligent friends; and the result is as will be seen below, that an annual sum of $227,000 is expended for the purchase of manures.*

This calculation is supposed by many to be below the actual outlay for manure, taking one year with another; and I have heard it suggested as a curious fact, or rather conjecture, that large as is this amount, an equal amount in value is annually received from the sale of the fish, clams, oysters and wild fowl of our Bays and Sound.

This estimate, while it is to be considered only as an attempt to fix the amount of outlay annually incurred by the farmers of Queens county for the materials to enrich their soil, furnishes at the same time the best evidence, that the profits of agriculture must be large and remunerating, in order to induce the farmers, who always look closely to their own interest, to expend annually so large a share of their receipts for such a purpose.

If, then, to the above sum of $227,000 expended for manure, be added the amount of that made on the land, estimated according to the English calculation at so much per head of the animals of the county, viz., cattle and horses at 13 cart loads, cows at 10, and sheep and swine at 1¼, it will be found that about 460,000 cart loads of manure at 4s., are annually made, equal in value to that procured from all other sources; 75,638, being the number of animals by the census of 1845, which calculation gives 6 loads per head all round.

It will be perceived that I have not entered into the field of chemical analysis as respects the soil or the manures to be applied to it; this has been done by others, on former occasions; and is a subject now within the reach and understanding of all, from the cheap and numerous treatises upon the subject. I have confined my remarks to the practical view of our agricultural condition and capabilities, and have endeavored by a plain statement of facts as they are believed to exist, to give to those most interested in the prosperity and welfare of the county, such details respecting its soil, its husbandry, its products, and its prospects, as may encourage them and others to pursue, with diligence and profit, the most independent and healthful occupation that man can exercise. The state of New-York, ever mindful of her own commanding position, was the first to commence the great work of internal improvements, and well has she been repaid for her wise forecast. Having provided the channels of communication, upon which might be borne the products of her own, and those of other states, she then expended a large sum of money, during a series of years, in the Geological Survey of the State; copies of which great work were distributed among the counties, at the cost price. She went one step further; for, remembering that agriculture was the occupation and support of the great mass of her people, she appropriated an annual sum of $8,000 for the improvement and encouragement of agricultural and domestic manufactures, a portion of which is paid to the several counties of the state, upon their raising an equal amount.

Having now concluded the remarks which I proposed to address to the society, and which I feel have but poorly rapaid your patient attention, it remains for me

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* At the landings of the town of North Hempstead, there was received from the 1st of July, 1847, to the 1st of August, 1848—

59,200 cartmen's loads of manure,	
147 tons of guano,	
3,800 loads of ashes,	
1,800 loads of lime,	
1,500 bushels of bone,	
30,000 bony fish.	
The value of which was,..............................	$47,878
The Long Island Railroad transported, during the same period, and principally for this county,	
14,000 loads of ashes,	
25,000 loads of manure,	
16,000 bushels of lime,	
Value, independently of guano, bone and bony fish,.....	42,371
	$90,249

If the 10,000 acres of arable land in North Hempstead require, in addition to that supplied by their own barn-yards, an outlay of nearly $50,000 a year for manure, Oysterbay, whose cultivation is about equal in amount, and, if as perfect, would also require an equal outlay,

equal outlay,..	$47,878
Flushing, with about one-half the number of acres,...	23,939
Newtown, with rather more than half,................	30,000
Hempstead, with 12,700 acres, would require a larger outlay than the towns already named; but, as she has other sources of supply, near at hand, from sea-weed and fish, I would not place her outlay beyond,..............	90,000
Jamaica, with about 4,000 acres requiring the aid of manure, a part of which is supplied by the L. I. Railroad, as is also that part of its line of road through the several towns of the county, may still be put down at an outlay of	15,000
Making together the sum of............................	$227,066

only to exhort the farmers of this old county to a steady perseverance in their honorable occupation; which has so far rewarded their toil and industry with competence and independence. May they properly estimate and approve of the provision which the state has thought proper to make for the promotion of the great cause in which they, and their brethren throughout the length and breadth of the land, are so steadily engaged. The benefit and advantages of which have again and again been made manifest both at the state and county fairs. So much so, that it is now a matter generally conceded, that inquiry and exertions have been stimulated, a more perfect system of cultivation pursued, a great improvement in all the implements of husbandry obtained, the breed of cattle and horses carefully attended to; and finally, an accurate knowledge of the component parts of soils, as well as of the qualities of manure, placed within the reach of all. In all these matters the farmers of the state have a deep interest. They constitute the great mass of its inhabitants, are constantly and laboriously employed in the cultivation of its soil, the gathering of its crops, and their transportation to the best market. An occupation as honorable and useful as it is ancient and necessary; and too much neglected by the youth of our country for other and more uncertain pursuits; one, too, in which the passions and the worst feelings of our nature find little room for growth or display, where the regularity of labor, the comforts of life, and the feeling of independence, which the ownership of the land ever imparts, tempers and chastens the character and sentiments of the tiller of the soil. Such is eminently the condition and the lot of the farmers of this noble state: may such continue to be the inheritance of their children.

System, Order, and Economy.

The farmer of the state of New York is deprived of the many and necessary facilities for studying, comprehending, and intelligibly practicing his profession. The farmers of the state of New York contribute more to the due education and accomplishment of the ministers of religion, of lawyers, physicians and merchants, by full three fourths, than either of the above classes do or can contribute for their own advancement, because when combined they even then do not amount in numbers to one fourth of the farmers of this state. We farmers, then, pay for the establishment of schools and colleges, of academies and universities, the energies of which are mainly exerted and directed to educate and advance the classes above referred to; and from them emanates special appliances for their respective individual classes. The farmer has reason to rejoice and feel proud of the benefits he is thus so largely instrumental in producing; he knows, acknowledges, and bows to, the efforts of the man of God, who meekly and purely devotes himself to the guidance of his fellow beings in the only path which leads to true and enduring happiness. The farmer has a proud satisfaction, too, in the means he has so richly afforded in bringing forward the eminent lawyer, who, when pursuing his own proper duty, is exercising benevolence and talent of the highest order in adjusting and regulating the contentions of his fellow men; and thus through all classes, the farmer has cause to rejoice and feel proud, in his liberal and cheerful efforts to develope and sustain them. But what has this powerful body of men done for themselves? *Nothing*—*nothing* for their own special advancement in the art and science of agriculture!!

And here let me ask reference to one of the principles claimed to be established at page 79 of the *Cultivator*, when first calling the attention of my brother farmers to the value and necessity of *order, system and economy*, it was then stated that "the power of man, when used without the application of mind or intellect, degrades him in his own estimation, reducing him to a condition of servitude and dependence."

It is not to be supposed that any man will deny this position, for we have abundant proof in the abject condition of man, thus circumstanced at various places on this earth. Admitting the truth of this position, is it not equally true, that the greater amount of intellect employed in directing the power of man, the more elevated, free and independent is his condition? Now let us apply these truths to *our* class, as farmers, and compare the amount of intellect we use in our vocation with the amount used by the divine, the lawyer or physician. Must we not frankly admit, that to a great extent, we are negligent in this particular; and, consequently, where this neglect prevails, there we are valued below our capacities and natural conditions? Yes, we may not deny it, but we can and ought promptly to open to the body of farmers the broad door to knowledge, whereby we may readily and easily substitute intelligence for mere force, "the power of knowledge for the power of muscle." While we participate in common in the blessings of our common schools, and while we joyfully and gladly contribute to the advancement of knowledge among other classes, let us no longer neglect the interests of our own sons, but with unceasing energy claim an equal distribution of *all the facilities* for the distribution of science and art, as applicable to the cultivation of the earth.

As our colleges and prominent seminaries are now conducted, they give us abundant opportunities for training the mind, for exercising it and enabling it to grapple with abstruse studies. All this is well, and is quite as important to the farmer as to any profession; but once within the walls of our present educational halls, and we find that the minds of the boys, though well exercised, are insensibly led from the most important and pure views of progress in life, by means of agriculture, to hazard their destinies in the ambitious short-lived road of public employment, or in the scheming, speculative tracks of trade and commerce. Here is the point, then, we must needs start from: either our existing system of education, in all our seminaries, must make agriculture a department equal in importance and as honorable in pursuit, as any and every other vocation of man, otherwise a large portion of the funds which we farmers now contribute for education, must be applied to the direct, special advancement of education, with a single view to the agricultural interests.

I need hardly remark that to this end, the farmer *needs* as high talent for his use, and as extensive knowledge as is needful for any vocation on the earth.

These are the means we must use, and probably the course we must pursue to cause our class to hold the elevation to which it is entitled, to use mind and intellect in the application of our power, securing the highest condition of man in this world, and the best preparation for comprehending and entering upon those duties which lead to perfect happiness in the world to come.

To produce this result, we have need for *order* and *system*, or in other words, union and systematic action, as a class of men pursuing a vocation distinct from all others,—more important than all others,—and without which, all art, all science would decay. AGRICOLA. *Seneca County.*

TAN CONVERTED TO MANURE.—This, it is said, may be successfully accomplished, by placing alternate layers of spent tan and lime, the former 2 feet thick, the latter 3 inches—remaining thus for two years.

Farming in Missouri, &c.

Eds. Cultivator—Time and inclination at length concurring, I proceed to comply with your request, made more than a year ago; and undertake the task of giving you an impartial account of our section of the country, its advantages and disadvantages, location, soil, products, mode of farming, &c.

Cooper county, of which Boonville, a village of some 2,000 inhabitants, is the county seat, is situated very near the centre of the state, about 160 miles by land, and 200 by water, west of St. Louis, on the southern bank of the Missouri river.

That river, though one of the muddiest and most turbulent streams in the known world, filled with snags and sand-bars, rendering its navigation difficult and dangerous, is, notwithstanding, of incalculable benefit to the farmers in its vicinity, in conveying their produce to market.

We are all on the tip-toe of expectation at present, in looking out for the great Pacific rail-road, which we calculate will run somewheres near here, if it ever runs at all. It is expected to give a great impetus to the business of farming, when it does come. How that may be I am unable to say, but we certainly need something to stir us up.

The timber and prairie are more equally divided in this county than in almost any other in the state,—decidedly more so than in any other possessing the same advantages of productive soil and convenience to market. When I say convenience to market, understand me as speaking comparatively. Our market here, at best, is very inconvenient, unless we avail ourselves of the home market, and that is limited, besides being very uncertain and fluctuating. The soil in this county is not so deep as in some of the other counties above, on and near the river, nor is it so well adapted to the growth of hemp and tobacco as some of them, but for Indian corn, oats, red and white clover, timothy, orchard and blue-grass, melons, pumpkins and squashes, sweet and Irish potatoes, turnips and beets, it is not excelled by any section I have seen, and my observation has extended over more than half the states in the union, and particularly over the west.

Particular localities may beat it in the production of some particular article named above, as the Wabash and Sciota valleys in Indian corn, some parts of Illinois in oats, and some of the southern states in sweet potatoes, but taken in the mass I believe we can compete with any portion of the continent. Wheat is a very uncertain crop here, on account of winter-killing, though when it escapes, we get good crops.

Buckwheat, barley and rye, do pretty well, though they are not cultivated to a very great extent. All kinds of fruits suited to our climate, such as apples, pears, peaches, plums, grapes, strawberries, &c., succeed admirably. Our prairies are covered with the wild strawberry, while our forests abound with wild plums, grapes and paw-paws, black-berries, raspberries, persimmons, &c., besides a variety of nuts, such as the hazel, hickory, black and white walnut, &c.

The principal articles of export from this section of the state, are hemp, tobacco, mules and horses, beef cattle, pork and wheat. The articles of hemp, tobacco and wheat, and most of the pork, is shipped to St. Louis. Our principal market for mules and horses is Louisiana, and for a few years past, Texas—a distance of from 400 to 600 miles, the nearest point, when taken by land, and 1500 or 2000 when carried by water. Last spring, however, the California emigration created a market for most of our surplus mules and oxen nearer home. The annual caravans leaving for California, together with the constantly increasing trade from this state across the plains to Santa Fe, will be very apt to cause an increased demand for mules and oxen for many years to come. Our stall-fed cattle are principally driven to St. Louis and slaughtered. But immense droves of 3, 4 and 5 year old steers, are annually bought up in this section and driven to Illinois, Indiana, Ohio and Virginia, there fattened, and then driven to Baltimore and other eastern markets. Our prairies afford fine grazing, and when they are eat out, the prairie grass is replaced by blue grass and white clover.

Farming here is conducted on the regular *skinning* system—taking everything and returning nothing, and new as the country is, numbers of farms are beginning to feel and show the effects of it. Crops on land that has been in cultivation from 10 to 15 and 20 years, are beginning to grow "small by degrees, and beautifully less." There seems to be a continual struggle with each farmer to have longer strings of fence, bigger fields, and more ground in corn than his neighbor. The result of which struggle, in conjunction with the ease with which land is brought into cultivation in the prairie convenient to timber, is that most of the farmers in this country *scratch* over a great deal of ground but *cultivate* none. Instead, however, of endeavoring to extricate themselves from their difficulties in the most reasonable way possible, that of ceasing to enlarge their farms and sowing grass seed until they are reduced to a manageable size, the cry is still more land, more corn. It is corn, corn, corn,—nothing but corn.

I know numbers of farmers who cultivate from 50 to 150 acres of land, who have not exceeded 5 acres of grass on their farms, and many of them not a spire except what nature has sown for them. This, too, in one of the best grass countries in the world, and where the same labor expended in the cultivation and sowing of timothy and clover hay, will feed fully double the stock that it would in raising corn. It is true that we have some honorable exceptions to this rule, but I am sorry to say not many more than one sufficient to prove the rule.

We have some excellent stock, but as a general rule the stock here is exceedingly scrubby. The generally received opinion amongst the sovereigns here, is, that a big corn-crib, well filled, makes fine stock, and consequently they are indifferent about improving it by procuring the improved breeds of cattle, hogs and sheep, to breed from. There has been more done in improving the breed of hogs than anything else, but there is great room for improvement yet, even with them.

The wheat crop has generally been very light here this season,—the rust destroying thousands of acres that had escaped the winter. I didn't cut a head of mine, which, but for the rust, would have made a tolerably fair crop.

Oats and timothy were fine. Owing to the long-continued wet weather and backwardness of the spring, the corn crop is rather backward, and in some parts of the state the prospect is very gloomy,—the wet weather preventing the planting of thousands of acres, as well as the cultivation of a great deal after it was planted. The prospect in this county bids fair for an average crop, and considering the unfavorableness of the season it looks very well, but being more backward, and much more foul than usual, a drought now would cut it short.

As to manuring, the idea is looked on as preposterous! "What! manure our rich virgin soil that only requires planting, and a plowing or two to produce ten barrels of corn to the acre! Absurd. That was not what we left our old worn out lands for—away back in old Virginia, old Kentucky, or Tennessee, as the case may be, where we had to tug and toil, scratch and scrape, haul manure all winter, and plough all summer, and then scarcely make enough to keep soul and body together? Let them haul manure that like it, we're not in that line of business."

That's the way they talk. Just "go it" my good fellow. Stick to that, and carry it out, and in less than 30 years you, or some of your children, will be using similar language away off in some nook of the Rocky mountains, or on the Pacific coast, in California or Oregon, or it may be in some prospective territory not yet "annexed."

Take the state over, and I have no idea that one farmer out of fifty has ever hauled a load of manure to his corn field since he has been in the state. I have doubts, even, whether one in a hundred has ever done it. Year after year the manure accumulates in their lots and crowds their stables and barns, a perfect nuisance, rotting down their barns and rendering it impossible for the stock confined in the lots to find a dry place to lie down in wet weather. So, of course, they have either to stand up or lie in the mud.

Food is plenty; an abundance is given them; they eat a little, perhaps a fourth of what is given; run over and tramp the balance in the mud, and then for want of some dry place to lie down and ruminate they stand knee deep in mud and shiver, while their owner wonders why his cattle don't thrive better?

Some, however, have the foresight and sagacity to avoid all this, by building their stables, barns, &c., over or contiguous to a ravine, by which they are drained, so that each shower abates the nuisance, and the lucky farmer is not troubled with muddy lots and rotting barns. But while this process is going on, how is the corn field progressing? Is it increasing in fertility, or maintaining its original productiveness? One might suppose from the way in which the "farmers bank," as the manure heap has been aptly styled, has been neglected, the spend-thrift manner in which the very essence of fertility is squandred, that the fertility of the soil was inexhaustible, and that the application of manure would be a work of supererogation—labor thrown away. But is such the fact?

If I might be allowed to express an opinion, I should say it was not. Although this state was settled as it were but yesterday, there are plenty of farms now within its limits that are literally worn out. Jas. R. Hammond. *Shandy Hall, Cooper county, Mo., Aug. 7th, 1849.*

The Veterinary Department.

Disease of Horses' Feet.

Eds. Cultivator—With your permission I wish to present the readers of your valuable journal with a few remarks on a disease of horses feet, which has been unusually prevalent during the last spring and summer. The disorder we are about to consider is known among "veterinarians" by the technical term navicular thritis, or navicular lameness.

The cause most fertile in the production of this disease is prolonged rest in the stable, the high temperature of the stable inducing dryness of the hoof and absorption of the sensitive, fatty frog, the horny part contracts, the sole becomes hard, thick, and concave; and if to these be added circumstances which still further favor the drying of the hoof, as the late long continued drouth, in many cases the elevation of the sole becomes permanent. If the horse is now taken out and called upon to perform severe exertion, his feet being highly predisposed, aré very liable to become the seat of inflammatory action, either in an acute or chronic character.

To occasional causes, belong galloping upon rough, uneven ground, sudden springs, during a hard trot, false steps in which the toes have to support an unusual amount of weight until the heels can reach the ground. It is stated by Youatt, that Prof. Coleman used to say with regard to shoeing, there were only two principles to be impressed upon the mind. "1st, The frog must receive pressure; 2nd, The sole must not." In fact I believe at the present day it is generally admitted as an established truth, that a certain degree of pressure to the frog is necessary, in order to keep it in a state of health; yet in the face of all this, we find more than one half our best horses shod with "calkins," which not only prevent pressure upon the frog, but give unsteadiness to the horse's action. Even in going down hill they place the limb in anything but a favorable position; they prop up the heels, and give the fetlock joint a forward inclination, and throw nearly the whole weight upon the toe of the foot. The symptoms which indicate navicular lameness, are a short, cautious step, most of the weight being thrown upon the toe, both in the stable and on the road. Generally the horse walks but little lame, although very much so in a trot. The sole of the foot is unusually concave, and the clefts are often very deep.

The treatment of course must vary with the stage and state in which we find the foot. In a recent case, after removing the shoe, pare the sole and rasp the crust thin at both quarters of the hoof, to diminish the pressure on the internal parts of the foot as much as possible, and then envelope the whole foot in cloths soaked in cold water, or in an ample poultice of bran or linseed meal, kept constantly moist with cold water. The poultice must be renewed once in twelve hours. Next, a blister, taking in the whole of the pastern and coronet, may be tried; and whèn the heels and quarters (if they were reduced by the rasp, &c.,) are sufficiently strong, a spring or thick heeled shoe (without calkins) should be carefully tacked on to the foot. This with a piece of felt or leather placed between the shoe and the crust, will (as much as possible) keep the injured part in a state of repose. The sole of the foot should be covered occasionally with tar and salt. If sand collects under the leather it (the leather) must be cut out close to the inner rim of the shoe. H. S. Copeman, V. S. *Utica, N. Y.*

Osage Orange Hedges.—There can be no question that these form the most formidable protection to orchards against thieves that has been discovered; but according to the results of the experiments at Mount Airy Agricultural Institute, Pa., they are not well adapted to small lots of land in tillage, the growth of corn and turnips having been greatly retarded by the influence of the roots for 10 or 12 feet on each side of the hedge.

Purity of Salt.—According to Dr. Beck's analysis,—

1000	parts Syracuse coarse salt	contain	991	pure salt.
1000	" " dairy salt	"	974	" "
1000	" Turk's Island salt	"	984	" "
1000	" Cheshire rock salt	"	986	" "

Depth and Altitude of the Lakes.—According to Dr Drake, St. Clair is 20 feet, Erie 84, Ontario 500, Superior 900, Huron and Michigan 1,000. Off Saginaw Bay, in Lake Huron, 1,800 feet of line have been let down without reaching bottom.

Lake Ontario is 232 feet above tide water; Erie 333 feet above Ontario; St. Clair 6 feet above Erie; Huron and Michigan 13 feet above St. Clair; and Superior 44 feet higher.

Huron can never be drained; for while its surface is 684 feet above the surface of the sea, its bottom in Saginaw Bay is more than 1,100 below the same level.

New-York State Agricultural Society.

State Fair at Syracuse.

The Ninth Annual Show and Fair of the New-York State Agricultural Society took place at Syracuse, on the 11th, 12th and 13th of September. Considered as a whole, the display may be said to have surpassed all those of former years. The people were out *en masse;* the number which entered the show-grounds could not have been less than sixty-five to seventy thousand.

The receipts for tickets and memberships, were eight thousand fifty-five dollars and fifty-five cents. The assemblage was gathered chiefly from our own State, though there were thousands from the various sister States, from Maine to Texas, and from the Canadas.

This association is evidently exerting an important influence—an influence which is not only felt throughout the whole of our own country, but is even affecting our national relations. It is opening and cultivating an acquaintance abroad, which cannot fail to be favorable to the promotion of peace, and a proper regard to our character as a people. At home, its annual exhibitions are justly looked upon as the most important gatherings of our citizens. On these occasions, men of all sects and parties mingle harmoniously together, mutually ardent for the advancement of a common object—the real prosperity of the country. Here friendships are formed by which party and personal animosities are worn away, and the people are brought to look, unbiassed, at those principles which concern their welfare.

The show-grounds were well situated. They were on a hill of sufficient elevation to give a fire view of the surrounding country, embracing an area of twenty-five to thirty miles. The field, which contained upwards of twenty acres, had some inequality of surface, but not more, perhaps, than was favorable to general picturesqueness. As at Buffalo, the cattle were placed in a grove, where they were protected from the scorching heat of the sun. The general arrangement of the classes was very convenient, and does much credit to Messrs. Sotham & Fuller, who had charge of this department. Stalls were provided on the ground for about seventy horses, but from the great number exhibited, it was impossible to accommodate in this way, but a small proportion of the whole.

We have only room at present for the following notices:

Of Horses there were fine specimens of the different classes; but as the writer was closely engaged in other departments, he had not an opportunity of seeing all the animals exhibited. Of blood horses, we noticed imported Consternation, owned by J. B. Burnet, Esq., of Syracuse; Young Alexander, owned by Mr. Ireland, of Albany, and Lance, owned by Mr. Huff, of Buffalo.

Of the Morgan stock, there were some excellent specimens from this State, and from New Hampshire and Vermont. The Gifford Morgan, twenty-three years old, owned by Mr. Wier, of Walpole, N. H., came over to the fair for the third time, not for premium; but just to show that time has not yet left on him any mark of age or decrepitude. Morgan Hunter, owned by Ackley & Gilbert, of East Hamilton, Madison county, N. Y., the General Gifford, exhibited by G. A. Mason, of Jordan, N. Y., and the Major Gifford, exhibited by Mr. Blodgett, of Chelsea, Vt., are valuable animals, closely resembling their sire, the Gifford Morgan. They attracted great attention. A very fine and showy horse, four years old, got by the noted Black Hawk, was exhibited by H. Felton, of Ticonderoga.

We noticed an excellent gray stallion owned by Alex. Maxwell, of Jackson, Washington county. He is a horse of fine action, and handsome appearance. An Irish hunter, imported in 1843, by Mr. Brown, of Johnstown, Fulton county, appears to be a strong and vigorous animal. A five-year-old stallion of his get, owned by Mr. Schermerhorn, of Schenectady, appeared favorably, as did also the horses of Mr. Nottingham, of Palmyra, and Mr. Blakeslee, of Connecticut, and others.

Of draught horses, we noticed several good animals, particularly Honest Tom, owned by Mr. Pettit, of Bridgwater, Oneida county, and Young Alfred. A chestnut stallion from Canada, weighing 1,400 lbs., attracted much attention.

Of colts under three years old, there was a large display, though we were unable to learn particulars in regard to many which deserved notice. Mr. Arthur, of Ticonderoga, Mr. Hall, of Bridport, Vt., and Mr. Austin, of Orwell, Vt., each exhibited a fine two-year-old, by Black Hawk. All showed remarkable symmetry and action for their ages. Mr. Burnet, of Syracuse, showed a very handsome colt, by Consternation.

The Cattle were more numerous, and in general of better quality than have ever before been offered at our shows. The greatest display was by the Devons. The Short-horns were better, on the whole, than at our shows for several years past. Comparing the different classes, we think the Herefords and Devons were more *evenly* good than the Short-horns, though among the latter there were some splendid animals.

Of Short-horned bulls, we noticed Col. Sherwood's imported 3d Duke of Cambridge, a bull of excellent points; a fine bull exhibited by Mr. Bell, of Morrisania, Westchester county; a yearling bull offered by Mr. Morris, of the latter place. There were several fine cows and heifers in this class from the herds of Col. Sherwood, of Auburn, Mr. S. P. Chapman, of Clockville, Madison county, Mr. Morris, and Mr. Rone, of Mount Morris, Livingston county.

Of Herefords, the principal exhibitors were Mr. Sotham, of Black Rock, and the Messrs. Bingham, of Vermont. There were several well-shaped bulls, and some excellent cows—all first-rate *handlers*—in this class.

The Devons were out in greater numbers than at any previous show. Mr. Washbon, of Butternuts, Otsego county, had forty head on the ground. Mr. Beck, of Sheldon, Wyoming county, had a numerous delegation from his justly esteemed herd; and specimens of the breed in smaller numbers were shown by various individuals. Among bulls, the one exhibited by Mr. Gapper, of Canada, could not fail to attract attention. He was, beyond question, one of the most complete and finished animals ever exhibited at our shows; and we think the breeders of Devons are under special obligations to Mr. Gapper, for exhibiting him on this occasion. Good bulls in this class were shown by Mr. Remington, of Sennett, Mr. Van Rensselaer, and Mr. Washbon, of Butternuts, Mr. Law, of Meredith, Delaware county, Mr. Hamlin, of Aurora, Erie county, Mr. Earle, of Salina, and others. Fine cows and heifers were offered by Mr. Washbon, Mr. Beck, Mr. A. Stevens, Mr. Van Rensselaer, Mr. Baker, and others, whose names we did not learn.

In Ayrshires, the competition was not large; but an excellent bull and some cows of first rate quality were shown by Mr. Prentice, of Albany. We noticed, also, some good animals in this class offered by Mr. Morris, of Morrisania.

The fat cattle were numerous, and generally excellent. A fine pair of Durham oxen, five years old, weighing 5,000 lbs., were shown by Mr. Sheldon of Sennett, Cayuga county; a fine pair of the same breed, four years old, were offered by Mr. Rone, of Mount Morris, who also exhibited two remarkably fat cows, nearly full blood Durhams. Mr. Leach, of Eaton, Madison county, showed a very fine cow, four years old, weighing 2100 lbs., a cross of the Durham, and a pair of large oxen. Mr. Newlan, of Sennett, showed a pair of cross-bred Durhams, six years old, weighing 5236—very fat. Mr. Doty, of Wyoming county, showed a very large pair of red oxen, one of which was a very fine animal. A three-year old Durham heifer, offered by Mr. Barber, of Cortlandville, attracted much and deserved commendation. She is an animal of uncommon symmetry, and was not excelled in the essential qualities of a *grazier* by any animal on the grounds.

Among the *grass-fed* cattle we noticed a beautiful pair of Devon oxen, offered by Mr. Beck. For lightness of offal and quality of flesh they were justly admired, and showed what may be expected of good Devons when turned to beef.

The working oxen we had not an opportunity of examining particularly. There was a team of twenty yoke from Homer, Cortland county, among which we noticed several yoke of good appearance. Mr. Sheldon, of Sennett, Cayuga county, had, as usual, several yoke of oxen and steers, of good form, and in fine condition. Mr. Church, of Vernon, Oneida county, showed a pair of four-year-old cattle, seven-eighths Devon, of good form, but rather small size. They had been trained with great care by Mr. Church's son, and exhibited a perfection of dicipline, and a degree of intelligence which we have never seen equalled in their species. Mr. Washbon, of Butternuts, and Mr. Bundy, of Otego, each exhibited several pair of beautiful cattle, three and four years old, half Devon, by a bull bred by Mr. Patterson, of Baltimore.

SHEEP of all classes were well represented. The large French Merinos were shown chiefly by Messrs. Bingham, of Vermont. Other Merinos of less size of carcass, but finer quality of wool, were shown by Col. Sherwood, of Auburn, Mr. J. L. Randall, of Lysander, Mr. Blakeslee, of Connecticut, and Mr. Robinson, of Vermont. Fine Saxons were shown by Mr. Church and Mr. Crocker, of Vernon, and Mr. L. G. Bingham, of Vermont. Some excellent sheep, a cross of the Saxon and Merino, were exhibited by Mr. Curtis, of Canaan, Columbia county. South Downs of good quality were shown by Col. Sherwood, and Mr. Wakeman, of Herkimer. Of long-wooled breeds, there were some excellent specimens of Leicesters shown by Mr. Miller, of Canada. Mr. Allen, of Black Rock, showed some good Cotswolds.

The show of SWINE, though better than that of some years, was not equal to the best. There were some good specimens of the Leicester breed, and of that breed crossed with the Berkshires. We noticed some young pigs bred by Mr. Henry Parsons, of Guelph, Canada West. They were a variety which Mr. Parsons has been several years in producing from a cross of the Sussex and Russian grass breed. They are small in bone, of handsome form, and give an excellent quality of flesh.

The show of POULTRY was comparatively meagre, and devoid of that interest which has for several years attached to this department. We noticed several coops of large fowls of the Malay race; Mr. Platt, of Albany, made quite a display of beautiful Java Bantams. They formed the most attractive feature of the poultry show. There were a few specimens Bremen geese, Muscovy and top-knot ducks.

DAIRY PRODUCTS were less in quantity than at Buffalo; but the display was, notwithstanding, creditable in extent; and we learned from the committee having charge of this department, that the quality of the butter and cheese was generally excellent. We observed that there was considerable competition from the principal dairy districts in this state, and there were several samples of cheese from Ohio. The lots being simply designated by numbers, we were unable to learn the names of the competitors, except in a few instances.

The IMPLEMENT DEPARTMENT was admirably filled, forming a display exceeding anything of the kind which we have ever before seen. We shall notice the articles more particularly hereafter. The principal exhibitors were Messrs. Emery and Wheeler, of Albany, Burrall, of Geneva, Rapalje and Briggs, of Rochester, Starbuck, of Troy, Eddy, of Union Village, Washington county.

The PLOWING MATCH was contested by eighteen teams. The writer was not present at the match, but from having seen the ground after the work was done, is enabled to say that it was done in a manner superior to that of any he has before witnessed at the matches under the auspices of the Society.

"MECHANICS' HALL" was filled with a multitude of articles, to notice all of which would require much more space than we can spare. We noticed a "Dairy Steamer" for warming and heating milk in cheese-dairies. Certificates in relation to its operation stated that steam sufficient for warming the milk of sixty cows can be got up in thirty minutes. It appears to be a useful article. It was exhibited by J. H. Bushnell, Utica.

A great number of stoves were exhibited, embracing all the improvements in this line. Mynderse & Co., of Seneca Falls, exhibited stoves with Race's regulator attached, as represented in a cut on another page of this number. It is a valuable invention. Dudley & Co., of Buffalo, exhibited a large assortment of stoves, the largest of which (Hathaway's) is capable of doing the work for the largest hotels. The price is $300. A double acting force-pump shown by Downs, Mynderse & Co., Seneca Falls, appears to be an improvement on pumps heretofore in use.

Mr. Wheeler, of Albany, exhibited Dix's anti-friction press. It is a powerful machine, being capable, by the power of one man, of cutting teeth from cold cast-steel plates, suitable for saw-mill saws.

A sewing machine, offered by Mowry & Johnson, New York, was a curiosity. It sowed two thicknesses of cloth in a firm manner at the rate of three feet per minute. The price of the machine is $100.

In the "MANUFACTURER'S HALL" the display was large and attractive, but from the great crowd of people which constantly filled the building, it was impossible to take particular notes of the articles, and we must refer to the reports of committees. Among the fabrics we noticed broad-cloths, cassimeres, and shawls, manufactured by D. Kellog, Skaneateles. The shawls attractted great attention, and were much sought after by purchasers. His other articles were of a quality that did credit to the manufacturer.

There was a good display of useful articles of household manufacture, and a large number of fancy articles.

In the FRUIT AND FLORAL DEPARTMENT, the display was less extensive than in some former years, especially in flowers, which, from the unprecedented drouth which has prevailed in the central and western portions of the state, have not developed themselves in their usual perfection. The size and quality of the fruits, too, has been affected by the same cause. Still the fruits exhibited, were mostly of good quality and fine appearance. Very fine peaches were shown from the neighborhood of Rochester, by Elwanger & Barry, and others. Apples and pears of the most esteemed kinds, were exhibited by B. Hodge and A. Bryant, of Buffalo, J. W. P. Allen, of Oswego, John Morse, Cayuga Bridge; and a very handsome collection from northern and middle Illinois, by Messrs. Harkness, Overman, and Kennicott. Fine specimens of plums were shown by Mr. Denniston, of Albany,—who presented fifty-five varieties from his own garden; by Dr. H. Wendell, of Albany, by Elwanger & Barry, Rochester, R. Woolworth, H. G. Dickerson, and others.

There were good specimens of grapes shown by Messrs. Langworthy of Rochester, Coppock of Buffalo, Hastings of Clinton, and others.

Of **Flowers** we noticed specimens, both singly and in bouquets, from J. Wilson, of Albany, Dr. Jackson, of Schenectady—(who exhibited a collection of splendid seedling verbenas of his own raising,) and Mr. Le Couteulx, of Buffalo. The latter gentleman presented several specimens of new variegated asters, of rare character, and most beautiful appearance, which attracted the admiration of all.

Among the curiosities in this department may be mentioned a cornucopia, offered by Mr. Barber, of Homer. Its frame-work was of wire, the exterior tastefully covered with beautiful flowers, and from its internal cavity, the finest and most luscious fruits of various kinds were pouring out. It was an object which received warm commendations.

A very pretty article consisting of a grass bouquet on a moss-covered stand, was much praised for the good taste displayed in its structure. We did not learn the name of the exhibitor.

The show of **Vegetables** was limited, the prevalence of the drouth being sensibly seen in this department. As usual there were some large pumpkins, one of which weighed 125 lbs We noticed some samples of seedling potatoes of good size and shape, but did not learn the name of the exhibitor.

The **Address** by Prof. **Johnston** was listened to by a very large audience, and was received with much approbation. The subject-matter consisted of two principal divisions. The first embracing a general view of the agriculture of the different countries of Europe; and the second a brief exposition of the principles of agriculture and its connection with the sciences. It was a document of considerable length, and occupied upwards of an hour in the delivery; but the deep interest manifested by the people in the beginning, was maintained to the last, as was indicated by the hearty cheers which greeted the speaker at the close. In a word it may be said that the high reputation which Prof. Johnston had acquired among our people, through his writings, was fully supported by the address; and we cannot but flatter ourselves that the impressions by the first acquaintance have been mutually favorable. Our opportunities for hearing the address would not justify an attempt to give even a synopsis of it, and our readers must be content to wait for its appearance under the sanction of the Society.

Among the distinguised visitors at the fair, were Hon. **Henry Clay**, of Kentucky, Vice President **Fillmore**, Gov. **Fish**, Ex-Gov. **Marcy** and Lieut. Gov. **Patterson**, Hon. **Frs. Granger**, of New York, Gen. **Wool**, Hon. Mr. **Clingman**, M. C., from North Carolina, Hon. H. L. **Elsworth**, of Indiana, and numerous delegates from the Canadas and the Agricultural Associations of the different states of the Union.

Draining.—The full advantages of thorough under-draining are rarely appreciated. An excellent practial farmer in this state, who has laid down several miles of tile drains, thinks that thorough draining will do more to improve the agriculture of New York, than all other improvements [without it] combined. Lands inclining to be wet can be plowed much earlier in the spring, an eminent advantage to some crops,—the plowing can be done with far greater ease,—and one plowing will pulverise the soil as well as three on undrained wet lands. The great advantage is in the vast increase in the amount of crops.

List of Premiums

Awarded at the State Fair at Syracuse.

CATTLE—Short Horns.

Bulls—*Over three years old*—1. To J. M. Sherwood, Auburn, $25.—2. Thomas Bell, Morrisania, $15.—3. S. P. Chapman, Clockville, $5.——*Two years old.*—1. Wm. Fuller, Skaneateles, $20.—2. A. G. Perry, $10.—3. J. B. Burnet, Syracuse, $5.——*Yearlings.*—1. L. G. Morris, Morrisania, $15.—2. S. P. Chapman, $10.—3. Not awarded.——*Calves.*—1. L. G. Morris, $10—2. J. M. Sherwood, Trans. and $3.

Cows.—1. S. P. Chapman, $25.—2. L. G. Morris, $15—3. J. M. Sherwood, $5——*Two years old Heifers.*—1. F. Rotch, Butternuts, $20—2. L. F. Allen, Black Rock, $10—3. F. Rotch, $5——*Yearlings.*—1. Ambrose Stevens, New-York, $15—2. J. M. Sherwood, $10—3. S. P. Chapman, $5.——*Calves*—1. L. F. Allen, $10—2. J. M. Sherwood, Trans. and $3.

DEVONS.

Bulls.—*Over three years old.*—1. R. H. Van Rensselaer, Butternuts, $25—2. R. M. Remington, Sennet, $15—3. Joseph Blakeslee, Westchester, $5——*Two years old.*—1. David S. Earl, Salina, $20—2. H. N. Washbon, Butternuts, $10——*Yearlings.*—1. H. N. Washbon, $15—2. David C. Howe, $10——*Calves.*—1. E. P. Beck, Sheldon, $10—2. H. N. Washbon, Trans. and $3.

Cows.—1. Ambrose Stevens, $25—2. H. N. Washbon, $15—3. E. P. Beck, $5——*Two years old.*—1. L. F. Allen, $20—2. and 3. E. P. Beck, $10 and $5——*Yearlings.*—1. H. N. Washbon. $15—2. E. P. Beck, $10—3. R. H. Van Rensselaer, $5——*Calves.*—1. H. N. Washbon, $10—2. Ambrose Stevens, Trans. and $3.

HEREFORDS.

Bulls.—*Two years old.*—1. Allen Ayrault, Geneseo, $30—2. W. H. Sotham, Black Rock, $10——*Calves.*—1. W. H. Sotham, $10—2. A. Ayrault, Trans. and $3.

Cows.—1. W. H. Sotham, $25—2. A. Ayrault, $15—3. L. F. Allen, $5——*Two years old Heifers.*—1. W. H. Sotham, (for Coquette) $20—2. A. Ayrault, $10——*Yearlings.*—2. W. H. Sotham, (for Jenny Lind,) $10—3. L. F. Allen, $5——*Calves.*—1. L. F. Allen, $10—2. W. H. Sotham, Trans. and $3.

AYRSHIRES.

Bulls.—1. E. P. Prentice, Albany, $25—2. L. G. Morris, $15——*Calves.*—1. E. P. Prentice, $10.

Cows.—1. E. P. Prentice. $25—2. Robert Rone, Mount Morris, $15——*Two years old.*—1. E. P. Prentice. $20——*Yearlings.*—1. E. P. Prentice, $15—2. Robert Rone, $10—3. L. G. Morris, $5——*Calves.*—1. E. P. Prentice, $10.

NATIVE AND CROSS BREEDS.

Cows.—1. David S. Earl, $20—2. S. P. Chapman, $12—3. L. G. Morris, $4——*Two years old.*—1. C. C. Cook, $15—2. D. S. Earl, $10—3. L. S. Bundy, Otego, $3——*Yearlings.*—1. E. Sheldon. Sennet, $10—2. P. B. Williams, $8—3. R. M. Remington, $3——*Calves.*—1. C. Merriman, $3—2. S. C. Parker, Trans.

WORKING OXEN.

Best team of 20 yoke from any county, to Cortland county, $50——*Single yoke.*—1. E. Sheldon, $25—2. John Bryden, $15—3. Hiram Clift, Trans. and $5——*Best trained Cattle.*—J. B. R. Church, Silver Medal.

STEERS.

Three years old.—1. H. H. Eastman. $10—2. E. W. Sheldon, $8—3. J. N. Clyde, Trans. and $3——*Two years old.*—1. B. H. Streeter, $10—2. E. W. Sheldon, $8—3. J. N. Clyde, Trans. and $3——*Yearlings.*—1. James H. Sherrill, $8—2. H. Sheldon, $5—3. J. Muir, Trans. and $3.

FAT CATTLE.

Pair of Oxen.—1. L. Doty, $25—2. E. Sheldon, $15—3. Asa Nowlan, Avon, $10——*Single Ox.*—1. E. Munson, $15—2. H. Sheldon, $10——*Cow.*—1. Clement Leach, $15—2. Robert Rone, $10——*Pair of Steers.*—1. Robert Rone, $15——*Heifers.*—1. J. Barber, Homer, $10.

Animals fattened on Hay and Grass only.—*Pair of Oxen.*—1. E. P. Beck, $20—2. Israel Boies, Cortland, $12——*Single Steers.*—1. E. Sheldon, $8—2. John Reeves, $3—3. J. B. Burnet, Trans.——*Cows.*—1. Robert Allen, $10.

FOREIGN CATTLE.

Best Hereford bull, L. G. Bingham, Williston, Vermont, $25—Best Devon bull, R. C. Gapper, Canada, $25—Best yearling bull, M. Bingham, Vermont, $10—Best bull calf, R. C. Gapper, $5.

Best Cow—1. To "Sally," $25, and 2. to "Cherry," $15, both Herefords and owned by L. G. Bingham, Vermont.

HORSES.

For all Work.—*Stallions.*—1. Wm. Ferguson. $30—2. Nottingham & Allen, Palmyra, $12—3. David Osgood, $8—4. O. Howland, Youatt——*Mare and Colt.*—1. Reuben H. Rust, $20—2. Edward Munson, $12—3. Anthony Decker, $8—4. Wm. Prior, Youatt.

For Draught.—*Stallions.*—1. Nottingham & Allen, $20—2. Cornelius Schobey, $12—3. John D. Spinner, Herkimer. $8—4. J. R. Thompson, Youatt.——*Mare and Colt.*—2. David Wemple, $12—4. J. H Lamberson, Youatt.

Blood—*Stallions.*—1. W. W. Huff. $20—2. Clark & Earl. $12—3. Simon Schermerhorn. $8—4. Pardon Austin, Youatt. To "Consternation," owned by J. B. Burnet. Certificate as the best in this class, he having heretofore been awarded the first prize.

Three years old.—*Stallions.*—1. A. Butler, $15—2. E. Moore, $10—3. H. S. Marsh, Youatt—4. Wm. Norton, Trans.——*Mares.*—1. Elias Thomas, $15.

Two years old.—*Stallions*—1. F. Brown, $10—2. R. G. Arthur, Ticonderoga, $6—3. J. Van Hoesen, Trans.——*Mares.*—1. John J. Boshart, $10—2. N. R. Williams. $5—3. J. N. Holmes. Trans.

Yearlings.—*Stallions.*—1. J. Muir. $5—2. J. Housenfrets, Youatt—3. Nathan Soule, Trans.——*Mares.*—1. W. B Van Slyke, $5—2. S. A. Gilbert, Youatt.

Matched.—1. H. Gould, $15—2. Thomas S. Clark, $10—3. Amos Lewis, $8—4. H. Otis, $5.

Geldings.—Certificate to Arden Merrill, Rose.—1. H. L. Barker, $10—2. S. S. Vaughn, $8—3. John Legg, $6—4. Nelson Boomer, $4.

Foreign.—*Stallions* —1. L. D. Harlow, Vermont, $20—2. J. Ashford, Vermont, $15—3. Calvin Blodgett, Vermont, $8—4. G. F. Wheeler, Youatt

SHEEP.

Long Wooled.—*Bucks, over two years old.*—1. Geo. Swails, $10—2. L. F. Allen, $8—3. Charles N. Hudson, $5——*Under two years old.*—1. Thomas Terry, $10—2. Wm. Rathbone, $8—3. C. N. Hudson, $5——*Pen of five ewes, over two years.*—1. Thomas Terry, $10—2. Wm. Rathbone, $8——*Under two years.*—1. Geo. Swails, $10——*Five buck Lambs.*—1. James Bicknell, $8—2. Thomas Terry, Am. Shepherd and $3——*Five Ewe Lambs.*—1. C. N. Hudson, $8.

Middle Wooled.—*Bucks, over two years old.*—1. Z. B. Wakeman, Herkimer, $10—2. J. M. Sherwood, $8—3. L. F. Allen, $5——*Uunder two years.*—1. J. M. Sherwood, $10—2. Wm. Robson, $8—3. Z. B. Wakeman, $5——*Pen of five Ewes, over two years.*—1. Wm. Robson, $10—2. Z. B. Wakeman, $8—3. J. M. Sherwood, $5——*Under two years.*—1. Z. B. Wakeman, $10—3. E. R. Dix. $5——*Pen of five buck Lambs.*—1. Z. B. Wakeman, $8—2. Wm. Robson, Am. Shepherd and $3——*Ewe Lambs.*—1. Z. B. Wakeman, $8—2. Wm. Robson, Am. Shepherd and $3.

Merinos.—*Bucks, over two years.*—1. N. M. Dart, $10—2. Jos. Blakeslee, $8—3. J. M. Sherwood, $5——*Under two years.*—1. J. D. Patterson, Westfield, $10—2. D. S. Curtis, $8—3. J. M. Sherwood, $5——*Pen of Ewes, over two years.*—1. J. M. Sherwood, $10—2. N. M. Dart, $8—3. Randall & Milliman, $5——*Under two years.* 1. J. Blakeslee, $10.

Saxons.—*Bucks, over two years.*—1. S. H. Church, Vernon, $10—2. S. B. Crocker, Vernon, $8—3. S. H. Church, $5——*Under two years.*—1. S. B. Crocker, $10—2. R. I. Ransom, $8—3. Joseph Haswell, $5——*Pen of Ewes, over two years.*—1. S. H. Church, $10—2. S. B. Crocker, $8—3. Randall & Milliman, $5——*Under two years.*—1. R. I. Ransom, $10—2. S. H. Church, $8—3. Randall & Milliman, $5.

The Hartford Premium.—For this prize of $100, there was but one entry, that of A. L. Bingham, of Cornwall, Vermont, to whom it was awarded.

Foreign.—*Long Wooled.*—To George Miller, of Canada, for best Buck, $10—and also for best pens of Buck and Ewe Lambs, $5 on each——*Merinos.*—Best Buck, to E. Robinson, of Vermont, $10 For best five Ewes, to M. Bingham, of Cornwall, Vt., and to E. Robinson, $5 each. The committee recommend a diploma to L. G. Bingham, for two Ewes.

FAT SHEEP.

Long Wools.—*Over two years.*—1st. $5, and 2d. $3, to J. M. Sherwood——*Under two years.*—1. Z. B. Wakeman, $5—3. Thos. Terry, Am. Shepherd.

Middle Wools.—*Over two years.*—1st, 2d and 3d, to J. Reeves, $5, $3, and Am. Shepherd.

SHEPHERDS' DOG.

1. To M. Bingham, Vermont, $5.

SWINE.

Boars.—*Over two years.*—2. H. N. Washbon, $5——*Yearlings.*—1. James Gilkeson, $10—2. David Preston, $5—3. B. Williams, $5——*Six months.*—2. C. R. Nichols, $3.

Sows.—*Yearlings.*—2. Franklin Thayer, $3.

Pigs.—1. Rufus Cossitt, $10—2. H. N. Washbon, $5.

POULTRY.

Fowls.—Best Polands, to J. S. Chesebrough, $3—Best Large fowls, to John J. Boshart, $3—Java Bantams, to E. Platt, Albany, $3.

Muscovy Ducks.—Best, to Charles N. Hudson, $3.

Geese.—Best large, to David Cossitt, $3.

FARM IMPLEMENTS, &c.

Plows.—The committee on Plows are to have another meeting, before they make their decision.

Best Farm Wagon, D. W. Seeley, $5.
Best Harrow, A. H. Fitch, $3.
Best Corn Cultivator, Jeremiah Fink, $3.
Best Fanning Mill, Jacob Clapper, $5.
Best Corn Stalk Cutter, J. C. Rich, $3.
Best Straw Cutter, J. C. Rich, $3.
Best Corn and Cob Crusher, H. L. Emery. $5.
Best Clover Machine. Rapalje & Briggs, Rochester, $5.
Best Ox Cart, Paris Barber, Homer, $3.
Best Horse Rake, R. H. Chase, $2.
Best Ox yoke, Gideon Hotchkiss, $2.
Best Carriage Harness, Moses Cherry, $3.
Best Saddle and Bridle, B. Suit, $2.
Best Churn, E. R. Dix, $2.
Best Dozen Axes, D. R. Barton, Rochester, $2.
Best Cheese Press, L. Raymond, $2.
Best Grain Cradle, Chas. Clow, $2.
Best Six Hand Rakes, H. L. Emery, $2.
Best Six Hay Forks, J. Vanorman, $2.
Best Six Grass Scythes, H. C. White, $2.
Best Six Cradle Scythes, Rapalje & Briggs, $2
Best Six Manure Forks, Rapalje & Briggs, $2.
Best Hay Rigging, J. N. Ransom, $2.
Best Six Dozen Corn Brooms, G. W. S. Brownson, $2.
Best Horse Power, L. B. Benton, Penn Yan, $5.
Best Threshing Machine, B. G. Hathaway, $10.
Best Seed Planter, Rapalje & Briggs, $3.
Best Wheat Drill, Aaron Palmer, Diploma.
Best Grain Drill, with apparatus for depositing the manure, Henry Hoffman, Diploma.
Best Broad Cast Sower, Silas S. Sage, Diploma.
Best Wheat Cultivator, D. B. Rogers, Diploma.
Best Portable Saw Mill, H. L. Emery, Diploma.
Best Corn Sheller for Horse Power, H. L. Emery, Diploma.
Best Corn Sheller for Hand Power, Harris & Carter, Diploma.

Best Show of Agricultural Implements, Rapalje & Briggs, Diploma and $20.

Best Show of Agricultural Implements made in the State, by or under the supervision of the exhibitor, E. J. Burrall, Geneva, Diploma and $20.

The collection of Implements by H. L. Emery, are recommended to the Society as worthy of special notice, for their excellent quality and finish.

H. E. Smith, for Horse Power, Diploma.
Best Saddle, R. T. Norgrove, Syracuse, Silver Medal.
Sausage Meat Cutter, Burdick & Cushing, Diploma.

PLOWING MATCH.

1. To E. Davis, Watertown, $10—2. W. G. Brainerd, Rome, $8—3. Samuel Phillips, $5—4. H. D. Preston, Elbridge, $5.

The last volume of the Transactions of the Society, was awarded to Samuel Lyderman, Geneva; Enoch Marks. Onondaga; O. Howland, Owasco; Thomas Miller, Homer; J. F. Maher, Clay; Wm. Miller, Onondaga; Robert Taylor, Skaneateles; Thomas Mix, Auburn; N. Kniffen, Scipio; John Baker; J. Porter, Onon. Hill; J. T. Hill, Lenox; Wm. Heming and John Morris, Onondaga.

CHEESE.

100 lbs. less than one year old.—1. R. D. Brown, Fairfield, $15—2. P. Carter, Lysander, $10—3. Samuel Mathews, Litchfield, $5—4. James P. Hitchcock, Truxton, Trans.

Messrs. Dolph & Barber, of Richmond, Ohio, exhibited a lot of "English Dairy" Cheese, very fine, for which they were awarded a Diploma.

BUTTER.

For the best and largest quantity, made from five cows in thirty days, to Nelson Van Ness, $25—2. To John Holbert, $15.

Made in June.—1. John Shattuck, $10—2. John F. Clark, $5—3. Abram Adams, Trans.

Made at any time.—1. Horace Clapp, $15—2. John Holbert, $10—3. John Shattuck, $5—4. Noah Hitchcock, Jr., Trans.

Made by Girls.—1. Miss Bardwell, Otisco, Silver Milk Cup—2. Misses Van Ness, Mayville. pair of Butter-knives—3. Miss M. E. Hopkins, Cortlandville, set of Tea-spoons.

MAPLE SUGAR.

1. Peter Mitchell, $10—2. Charles W. Taylor, $5—3. Luman Shepherd, $3—4. E. R. Dix, Trans.

DOMESTIC MANUFACTURES.

Woolen Blankets.—1. G. W. Henry, $6—2. Mrs. B. R. Voorhees, $4—3. N. M. Coburn, $2.

Flannel.—1. G. W. Henry, $6—2. Chester Clark, $4—3. C. Lawrence, $2.

Woolen Cloth.—1. W. Baker, $10—2. Mrs. Voorhees, $8—3. S. W. Abbott, $3.

Woolen Carpets.—1. W. E. Talman, $10—2. J. Conger, $8—3. S. Goodell, $3.

Rag Carpet.—1. A. A. Sweet, $6—2. Caroline Tice, $4—3. Betsey Hoffman, Trans.

Hearth Rugs.—1. E. Sheldon, $5—2. Misses J. and M. Robb, $4—3. Miss J. M. Lathrop, $3—4. Mrs. H. Wier, $2.

For pair Kersey Woolen Blankets.—To Mrs. J. W. Collins, $4.

For Double Carpet Coverlids.—1. Wm. Wright, $6—2. L. T. Marshall, $4—3. Wm. Wright, $3—4. Mrs. H. Wier, $2—5. J. E. Dederman, Trans.

For 15 Yards Kersey.—1. and 2. Mrs. J. Harrold, $5 and $4—3. Mrs. H. Wier, $2.

For Knit Woolen Stockings.—1. H. B. Lawton, $2—2. Horace Clarke, Trans.

For Wove Woolen Stockings.—1. Mrs. J. B. Noyes, $2—2. Mrs. S. H. Church, Trans.

For Woolen Fringe Mittens.—1. C. Lawrence, $2—2. H. Clarke, Trans.

For Pair of Gloves, to Mrs. J. P. Noyes, Diploma.

For Pair Lady's Mittens, Mrs. L. T. Marshall, Diploma.

For Buckskin Mittens, very superior, to Z. & W. Case, Gloversville, Diploma. (*To be continued.*)

Corn Fodder and Pumpkins.—J. H. Jenne, in the Boston Cultivator, says that two cows, in fine order, fed on corn-fodder, and with each a large pumpkin a day, gave fourteen quarts of milk per day. When the corn-fodder and pumpkins were gone, they were fed on good hay, when they fell off to seven quarts per day.

Hens eating their eggs.—Hens, it is well known, when kept shut up, are very apt to eat their eggs. The best preventive is to keep them well supplied with lime and gravel, and with *meat* in some form. The nest should be so deep in the boxes that they cannot reach them while standing on the edge.

Barley.—Myron Adams, of East Bloomfield, N. Y., states that nine premium barley crops have been raised in that township in the last six years; the greatest 69 bushels per acre, the least, 48¼ bushels; the average, 59½ bushels; the average cost, including interest on land, $10; average price, 50 cents; average nett profit, $14 per acre. They all grew after well manured corn; the amount of seed sown, in nearly every case, was 3 bushels per acre.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

North American Pomological Convention.

This body held its sessions on the day following the close of the State Fair, and was organized by the appointment of Dr. J. A. KENNICOTT, of Illinois, as President, and F. R. ELLIOTT, of Cleveland, and B. HODGE, of Buffalo, as secretaries, with a vice-president from each of several different states.

A committee of five was appointed, consisting of Dr. Wendell, of Albany; Dr. Kennicott, of Illinois; Charles Downing, of Newburgh; Benj. Hodge, of Buffalo, and Prof. J. J. Mapes, of New Jersey, to confer with a similar committee to be appointed by the approaching Congress of Fruit Growers, to effect a combination of the two national organizations into one, and promote uniformity in Pomology.

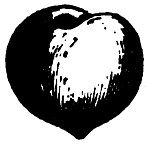
Most of the time of the convention was occupied with the discussion of the merits of the different fruits, and their adaptation to the various localities of the northern and western States. This discussion possessed much interest, and many valuable facts were elicited, of which we may have space another month to present a condensed report.

The Convention continued but a single day, and was more numerously attended than the former one at Buffalo, but much less so than the American Congress of Fruit Growers last autumn. A good collection of fruits was exhibited, but smaller than usual, from the unfavorable season, and from the decay and bruising consequent on their previous exhibition at the State Fair.

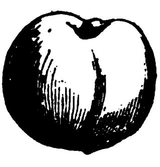
Among those who took the most active part in the discussions of the convention, were, C. M. Hovey, Boston; N. Goodsell, P. Barry, Rochester; W. R. Coppock, B. Hodge, A. Bryant, Buffalo; Dr. Kennicott, Illinois, H. P. Bryam, Kentucky; David Thomas, Aurora; J. W. P. Allen; Oswego; C. Downing, Newburgh, and others.

Early Peaches.

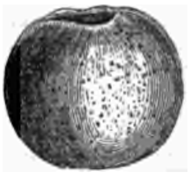
The similarity in size and form has always presented a serious difficulty, in distinguishing by description, some of the most celebrated varieties. There are, however a few of the early varieties that are quite strongly marked in their external appearance, some of which we here figure, reduced accurately to one half their usual diameter, and which well exhibit the relative sizes and forms of these sorts.



Yellow Nutmeg.



Early Anne.

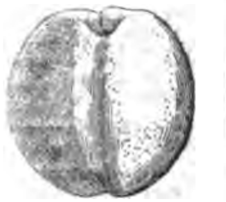


Early Tillotson.

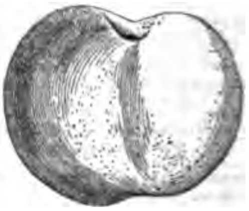
THE YELLOW NUTMEG is quite small, and a very moderate bearer, ripening about one week before the Early Anne. It is a very free grower, in which respect it differs from the Early White Nutmeg, which is smaller and earlier, and from the Red or Brown Nutmeg, and also from the Early Anne. Its flesh is deep yellow, and of good quality. It appears not to be described in the books, unless it is the "*Early Yellow Nutmeg*," mentioned in the Catalogue of the London Horticultural Society. Its flowers are medium or rather large, and its leaves bear reniform glands.

THE EARLY ANNE is small, often nearly medium in size, greenish white in color, of pleasant flavor, and were it not for its slow growth, and great liability to injury by the cold of winter, would be of great value. It is a very moderate bearer. *Fay's Early Anne* is a hardy free growing variety, twice the size of the old variety, but is a few days later, ripening a little before or with the Tillotson. It furnishes an agreeable variety among very early peaches, differing in its flavor from the other sorts of the same period. After three years fruiting by the writer, it has uniformly proved a very pleasant and good peach.

THE EARLY TILLOTSON is full medium in size, deep red, high-flavored, and a great bearer. It often ripens, as far north as 43 degrees of latitude, by the 10th of 8mo. (Aug.) The mildew which covers the leaves of the young trees, towards the close of summer, is an objection, especially among nurserymen, with whom a rapid handsome growth is of great importance. It succeeds finely throughout the Southern States, where it ripens sometimes the first week of summer.



Serrate Early York.

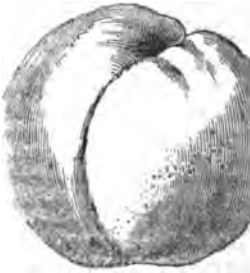


Large Early York.

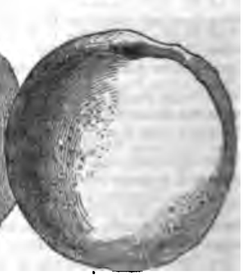
The SERRATE EARLY YORK, (known also as "True Early York," "Early York of Downing," &c.) is a little larger than the Tillotson, deep red, and ripens at the same time; and by most persons is considered fully equal in flavor; while the growth of the young trees is rather more vigorous, and nearly or quite free from mildew. Its oval form, early maturity, glandless leaves, and large flowers, distinguish it from all other varieties of its season.

The LARGE EARLY YORK is quite distinct, being ten days later than the preceding, larger, round or rather oblate in form, and bearing glandular leaves and small flowers. Its form, though very different from the Serrate Early York, does not distinguish it from several other sorts, of nearly the same season, as for instance the *George the Fourth*, *Walter's Early*, *Grosse Mignonne*, &c.

Passing several fine varieties which ripen within a few days of each other, such as *Cole's Early Red*, *Early Royal George*, *Cooledge's Favorite*, *Bellegarde*, *Early Newington*, &c., we come to two very large and showy yellow peaches, rather early or medium in season, distinguished by their popularity in market, viz:—



Jaques Rareripe.



Early Crawford

CRAWFORD'S EARLY, or *Crawford's Early Melocoton*, quite large, very handsome, and peculiar for its true *oval* form, which in very finely grown specimens nearly approaches globular. Although not of first rate quality, its great size and beauty have nearly placed it at the head of the list of market peaches. F. R. Elliot, of Cleveland, stated at the Buffalo Fruit Convention, that he had raised specimens measuring ten inches and a half round. Further north, it does not grow so large.

JAQUES' RARERIPE is a yellow peach, with a red surface, of the largest size, usually exceeding Early Crawford as far north as New York and New England. Its quality, though good, not of the highest character.

Roses.

Extracts of Letters from DAVID THOMAS, *near Aurora, Cayuga Co.*

NEW SEEDLING.—" Two or more years ago, I found a little seedling rose under the Champney, and transplanted it into a more roomy place. Last season, one shoot grew about 12 feet,—a perfect trailer,—and two shoots this year may extend 15 or 20 feet each. The flowers are in clusters, a light pink color, very double and beautifully formed. Like the Champney, however, it is rather tender, and will require to be laid down and covered with evergreens in winter. It opened yesterday for the first time, and we are all delighted with it. It is the smallest of all roses in my collection, which adds to its interest." 6 mo. 23, 1849.

PRAIRIE OR MICHIGAN ROSES.—" Our *Chillicothe* rose is much later than the other kinds, and will not be in bloom for some days—while the other four,—*Queen of Prairie*, *Baltimore Belle*, *Pallida*, and *Caradori Allan*, are in their glory. The *Queen* crowns the post *through* which it is fastened,[*] and some have thought it the finest object of the kind ever exhibited. As the flowers are not much clustered, they resemble little bells, but cover up the post completely. This circumstance is of much importance, and in training ought never to be forgotten, otherwise the post may appear like a tree with a dead top. The *Baltimore Belle* has its flowers in masses, and is not so picturesque on this account. *Pallida* has the best shape, but I fear is not sufficiently rampant in its growth for pillars. *Caradori Allan*, only semi-double, is more of a rose color than the others, grows rampantly, and will cover up the post. Professor Jackson said last year that none of his made a finer appearance, if so fine. Its flowers, like the *Queen*, are not much clustered, which is a great advantage. The *Chillicothe* also has a great growth, and we have one more than a foot higher than the post, and will soon be glorious.

" My *new seedling* has been admired, but like the *Greville* and *Laure Davoust*, is rather tender. I think it not quite so fine, however, as the two last mentioned. If these were hardy, nothing could exceed their splendor." 7mo. 6, 1849.

LAYERING ROSES.—" Col. Young's method was to bud the new kinds on a thrifty shoot, and the next season when they started to grow, to lay them in a trench, earth them, and let them root. This plan is excellent for such as grow without flowering that season; but such as bloom abundantly, will rarely root, and often perish. In this way, I lost Fanny Parisot, Prince Albert, and others. I am now trying if destroying the blossom buds will not cause them to root, by stimulating the branches, as flowering is a very exhausting process. But I am carrying the experiment further. Pruning judiciously will often cause new sprouts to supply the want of foliage that the plant has lost; and whenever this takes place in a layer, it is strongly stimulated to strike new roots. Indeed, we may lay it down as a *general rule*, in respect to layers, that the growth of the root will be proportionate to the growth of the branches. To encourage this growth, the ends of the layers ought to be left as erect as possible." 7mo. 6, 1849.

" I find in making layers of rose shoots of the present year, that they are very impatient of slight injuries; and therefore it is best to bend down the stem into which the buds have been set, soon after vegetation commences, and the young shoots will be more erect. There is also an advantage in *beginning to earth* them early, as the bark is prevented from becoming rigid, and the fibrous roots from the base of the new stems will more readily strike." 6mo. 23, 1849.

PILLAR ROSES.—" I cannot discover many roses besides the Michigans, the Boursalts, and the Ayrshires, that are suitable for tall pillars *in this climate*. The Multifloras, indeed,—including the Greville and Laure Davoust,—on account of their not abiding our winters without protection, may be trained on the ground by moderate pressure, such as a flat stone or a block of wood,—covered with litter or evergreens, and then raised up and fastened to the post in spring, not omitting to wind them round it. *Hybrid Blanche* and *Watt's Celestial* show quite an aspiring disposition. But several others which I procured for this purpose, are totally unsuitable for this northern land, though they may do well three or four degrees further south. Of this kind is *Cora L. Barton*, *Solfaterre*, *Sandeur Panache*, *Madame Desprez*, and *Gloire de Rosamene*; I have not perceived any climbing tendency about them.

" I have learned something since last year in regard to training pillar roses. I began by passing the stem through the hole in the post, and then forming a considerable curve before it entered the hole next above, like a person with arms a-kimbo; but when they came into bloom, the appearance was not fine, but rather discordant to taste. Much of the post was not concealed; and when the top was bare, it reminded me of a dead topped tree. I now therefore wind each stem closely round the post—say once in three or four feet, and then pass it through a hole to prevent it from falling. In this way, and in consequence of the lateral branches of the next year, which bear the blossoms, the post will be covered up and concealed, while it will be thickly clothed with bloom from top to bottom, and be literally *a pillar of roses*."

Soils for Pears and Peaches.

EDS. CULTIVATOR—A reader of the *Cultivator* requested me to say through the medium of your paper, what soil I considered the most suitable for the pear and peach; as he appears to have a variety of soils, I would say most pears require a strong loam; the Skinless pear does better on clay land; the Bartlett does well on a variety of soils; Mire Joannette, Madeleine Dearborn's Seedling, Bloodgood, Winter Nellis, Beurre d'Aremberg, Virgalieu, and many more might be named, that will do well on rather light soil if made rich. The Beurre Diel requires a rich close soil.

The peach with me, does best on black gravelly loamy soil. The White Imperial requires a more retentive soil than most peaches; the Earl Tillotson, Early York, Red Rareripe, and Beckwith, require the loam. The Beckwith Peach originated here, and all things considered, is the best peach for market we possess. For light sandy soils, Walter's Early. The planting season is now drawing near. S. WORDEN.
Oswego, Sept. 3rd, 1849

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[*] See Fig. and description of this mode of making pillars of roses, in last No. of the Cultivator

Fruit Culture at the South.

CUTTINGS.—Suffer me to give you what we regard in this latitude, 37½°, to be facts, as regards "propagation by cuttings."

I have grown, and can show at this writing, the pear, peach, and plum, growing from cuttings in the open air. I grew last season quite a number of the pear, the cuttings being used as temporary stakes to hold labels; some of them grew to a size of half an inch, and full 4 to 6 feet high. I have seen the apple grow in the same way. I have seen an orchardist at Vicksburg grow peach trees—but only a few—from cuttings.

A favorable season is all that is needed. The past was quite a moist one, though no great quantity of rain. Cuttings do not succeed so well when very deep; they damp off,—taking a kind of dropsy.

I have tried plums and peaches a few times, but my situation was not favorable. Cape Jasmine will not grow here from cuttings; but with some persons they grow as readily as willows do.

I do not think any person can feed himself at making trees from cuttings of the apple, peach and pear; but they will grow sometimes.

[At the north, all experiments of the kind uniformly fail, unless performed with the increased heat and moisture obtained under glass. At the south, the atmosphere of damp seasons more nearly approaches that of a hot-house, and consequently proves more favorable to the growth of cuttings, &c. ED.]

GRAFTING THE PEACH AND NECTARINE.—In February, 1848, I grafted some six varieties of the nectarine, and lost, probably, one in twenty-five; the grafts were sent to me some 75 miles, by steam and its detentions. I have grafted the peach upon plum and peach for two years, and upon pieces of roots for one year; and have as large and thrifty trees grafted in January and February, as those budded the previous summer, with a growth of two feet the same season.

STAKING TREES.—I never advise a stake. Head down newly planted trees to one foot, or two or three or four feet, according to size, cut branches well in, and no wind will disturb them. Stakes are troublesome; and, when neglected, do a wonderful sight of harm. In 1845, I put my gardener (a Dutchman,) and my servant (a carpenter,) to staking my trees—peaches; the next spring they were rubbed, and bruised, and injured so greatly, that I had to cut down many of them. They are the last that I staked, and I have planted out 2,000 since.

[The very rapid growth of newly transplanted trees at the south, renders large size a matter of less importance,—in the view at least of most cultivators,—than at the north; and hence staking becomes less needful. But even here, trees of moderate size, with the shoots well shortened-in at the time of removal, which should in no instance be omitted, rarely need staking, *if the roots have been taken up of good length.* Such trees may be protected from the motion of the winds through winter, if set in autumn, by a conical mound of earth, a foot high round the stem. But in cases, where trees are so large, or the roots so much shortened in digging up, that they cannot withstand the force of the winds, staking becomes quite essential, and all danger of chafing the bark must be precluded by firm straw bands. ED.]

TRANSPLANTING.—I do not transplant as is usually done. I precede the planting by either breaking up new land entire, or throw 6 or 8 furrows together, with a two-horse plow; and if the land is hard, I follow with another plow. Thus I save much labor in digging holes.

Is it not bad policy to make a hole 2 or 3 feet deep in a tough clay? Will it not hold water, and prove injurious?

In January, 1848, I dug out 2 feet deep, a trench 5 feet by 90, for asparagus; the best manure and rich soil from the woods were turned in, all mixed well, and planted with the roots; they grew extraordinarily. This year there cannot be one fiftieth remaining. Why? I think the clay retained all the winter water, and rotted the roots. My garden is upon a clay subsoil, and holds water like a jug. Next season I shall drain it.

I have now over 40 acres of fruit, embracing about 160 varieties of peach, 175 pear, 75 apple, 30 plum, 10 or 12 apricot, 8 or 10 nectarine, 3 quince, 6 figs, &c. &c.; my object being to test in the south. I shall continue gathering for a few years, and then cut down [all but the best] and throw into the fire. M. W. PHILLIPS. *Edwards, Mississippi.*

Stoddart's Washington Alpine Strawberry.

Many of our readers have heard of the great fame of this variety in time past, most of whom are aware that those who have tried it, regard it as a great imposition upon the public. The following remarks from the Horticulturist, not only place the subject, as we believe, in its true light, but also afford some valuable hints for the successful culture of the strawberry:—

"Two points must be understood, to grow the best strawberries: 1st, that the soil must be deep; and 2d, that it must be rich. If you look at the leaves of a strawberry, and, because they are not very large, presume that the roots will extend but little depth, you are greatly mistaken. I have seen the roots of strawberries extend five feet down in a rich deep soil; and those plants bore a crop of fruit five times as large, and twice as handsome and good, as the common product of a soil only one foot deep.

"And this reminds me of a capital instance of *strawberry delusion,* which most of your readers doubtless know something about, but which many even yet do not, perhaps, fully understand. I mean the history of the 'Washington Alpine Strawberry,' which Mr. Stoddart, of western New-York, advertised and sold a great many dollars' worth of, some four or five years ago. Mr. Stoddart, I believe, was quite honest in the transaction; and yet the whole public were completely deluded by the 'Washington Alpine,' which was nothing but the old Alpine or monthly strawberry. The long and short of the matter was, that Mr. Stoddart had a corner of his garden which was *made ground,*—a rich deep moist soil, (I think it had been an old bog, or bit of alluvial, afterwards filled up,) not less than 8 or 10 feet deep. Mr. Stoddart had raised some seedling Alpines, (which, so far as I know, always come the same from the seed;) he had by lucky chance planted them in this corner of his garden, where the soil was so unusually rich and deep. There they grew so finely, and bore such enormous crops, that his neighbors could scarcely credit their senses. The story of the miraculous crop got into the papers. People came to see with their own eyes. In short, they bought and carried away the 'Washington Alpines,' at extravagant prices, with the full conviction that 'seeing is believing,' and that such strawberries were never before grown, gazed on or tasted. Well, great was their surprise to find, on planting and cultivating the 'Washington Alpines,' that there was nothing new or wonderful about them; and that, in fact, they all dwindled down to the old fashioned Alpine strawberry. Mr. Stoddart, naturally enough, now has as many hard names bestowed on him for the fancied deception as he had before had hard dollars for really great crops. And yet, Mr. Stoddart sold his plants in good faith, and was probably as much deluded as the buyers. The whole secret of his unheard of crops, and the large size of his fruit, lay in the depth and richness of his soil; and as none of his customers had, like him, a rich ten feet mould to grow giants in, they had no 'Washington Alpines.'"

Notes on Apples.

Extracts of Letters from DAVID THOMAS, *near Aurora, Cayuga Co.*

We have been trying the *Broadwell* from Ohio, and it has been much admired. It greatly resembles the Bough, and some have proposed to call it the Winter Bough. Some of us have thought it the best sweet apple we have ever tasted *in winter*. 2 mo. 4, 1849.

The Wagener. Two persons from Penn Yan, well acquainted with this apple, both represent it as the best they ever tasted, and speak of its *tenderness* as a remarkable quality, and state that it is good if gathered even before it is full grown.

Domine. Perhaps I have no apple in my collection so perfectly *crisp* as the Domine. It seems not to have lost a particle of moisture since it was gathered from the tree. There are small dead spots just under the skin; but whether this defect is *accidental* or *characteristic*, I do not know.* It has a very superior flavor, but it is hardly *intense* enough. If we could increase it, it would be the best apple that I know. 2 mo. 10, 1849.

The Jonathan is better than it was a few weeks ago, because riper, and at this time I prefer it to the Spitzenburgh, which has rather deteriorated. 3 mo. 15, 1849.

Manning's Green Sweet is *dry* and *crumbly;* keeps well, but is scarcely fit for the table.

Domine remains remarkably without withering. It seems to have lost no moisture. Its flavor is very agreeable, though too much *diluted*. 3 mo. 15, 1849.

Peck's Pleasant bears every year, and is always free from the smut (lichen) on its surface. Its muskiness renders it more acceptable to some, and it is a very rich fruit besides. A gentleman lately, while eating one, pronounced it superior to all other known apples. Mid-winter appears to be the period of its greatest excellence. When kept in a warm place, the skin has generally become embrowned; but perhaps this may have arisen from white frosts before the apples were gathered. They do not keep as well as the *Swaar*. P. S. They appear to have been injured by frost on the tree,—because on one side (the most exposed,) they are injured to the depth of a line or more, while they are nearly or quite free on the other side. From this circumstance, it would seem that they ought to be gathered early.

6 mo. 1, 1849. Our two best keeping apples at this time, are the *Jonathan* and *Golden Russet*. [Not the Am. Golden Russet or Bullock's Pippin.] They also retain their flavor well, especially the latter.

Red Astrachan. This is the best very early apple for cooking in my collection, and I doubt if we have any *late* one that is equal to it for this purpose. Every freeholder that has room for a tree, ought to have at least one of this sort; and having proved its value, he would not be easily tempted to do without it. Even in this unfavorable season, the fruit is very fair; but it is too acid for the dessert. 8 mo. 15, 1849.

ROSE BUGS.—We observe a successful recommendation in some of the papers, of a mode of protecting rare and valued sorts of roses from rose bugs, by means of cheap gauze or other fine netting, placed in the form of a bag over the bush.

Horticultural Items.

PEARS ON APPLE STOCKS.—There are very few varieties of the pear which will succeed well on apple stocks, and those few are by no means attended with invariable success. A neighbor has found no pear to grow better when grafted or budded into the apple, than the Vicar of Winkfield, few failures occurring, and the young trees growing vigorously. The following statement, however, from the editor of the New England Farmer, shows the importance of not hastily adopting this mode of raising the trees:—"We have a scion of the Vicar of Winkfield pear that has been growing five or six years on an apple tree. *The fruit is always hard and never ripens.*"

RAISING ONIONS.—S. Williams, of Waterloo, N. Y., states in the Gen. Farmer, that the best way to obtain early onions, is to "plant the black seed after the summer drouths are over, take them up in November and put them in the cellar—and in April set them out in beds. They will soon mature, and are much better than what are called top-onions. If you have a few small onions in the ground all winter, they will come forward very early in the spring, and may be eaten as a salad, tops and all."

TABLE GRAPES AT CINCINNATI.—The report of the Hamilton County Agricultural Society in Ohio, states that not less than 500 bushels of Catawba and Isabella grapes were sold at Cincinnati during the past season, for "table use." The price was three to four dollars per bushel.

STRAWBERRIES—230 BUSHELS PER ACRE.—The Horticulturist states that a cultivator at Newburgh raised in 1848, on a bed measuring ten feet by twenty, *thirty-four quarts* of Hovey's Seedling strawberry, or at the rate of 230 bushels per acre. The soil was trenched two feet deep, very heavily manured from the stable, and subsequently with poudrette, with some ashes and salt. The whole was worked over two or three times; the plants were set out in the spring of 1847, and the crop gathered in 1848.

In the latter part of summer 1847, the bed was enlarged to 24 feet by twenty, by the addition of Swainstone Seedling and Black Prince, with similar manuring. In 1849 the whole bed (including the Hovey's) bore about 80 quarts, or over 200 bushels per acre. The editor of the Horticulturist states that at least *four times* as much manure was used as is usually employed in preparing strawberry beds.

PEACHES AT THE SOUTH.—M. W. Phillips, of Edwards, Miss., in a communication to the Horticulturist, says that the two best very early peaches at that place are the *Tillotson* and *Serrate Early York*. They ripened the present year about the 6th of 6th month (June.) The Tillotson proves to be of healthy and rapid growth, and bears better than the Early York, which is rather preferred in flavor, but is liable to rot. *Cole's Early Red* proves to be a fine peach, but inferior to the others.

BLACK PRINCE STRAWBERRY.—James Dougall, of Amherstburgh, C. W., says that with him the plants of this variety are quite hardy and resist both cold and heat; and that on his soil it is more than twice as productive as Hovey's Seedling. The Cincinnati Hudson is the strongest grower he possesses, and is by far the most prolific bearer.

SALT AS MANURE.—The editor of the New England Farmer says, "Corn and beans have flourished well where we have planted them on lands overflowed by salt water at the time of high tides in the spring and fall; but on the same lands potatoes were inferior just as far as the salt water extended."

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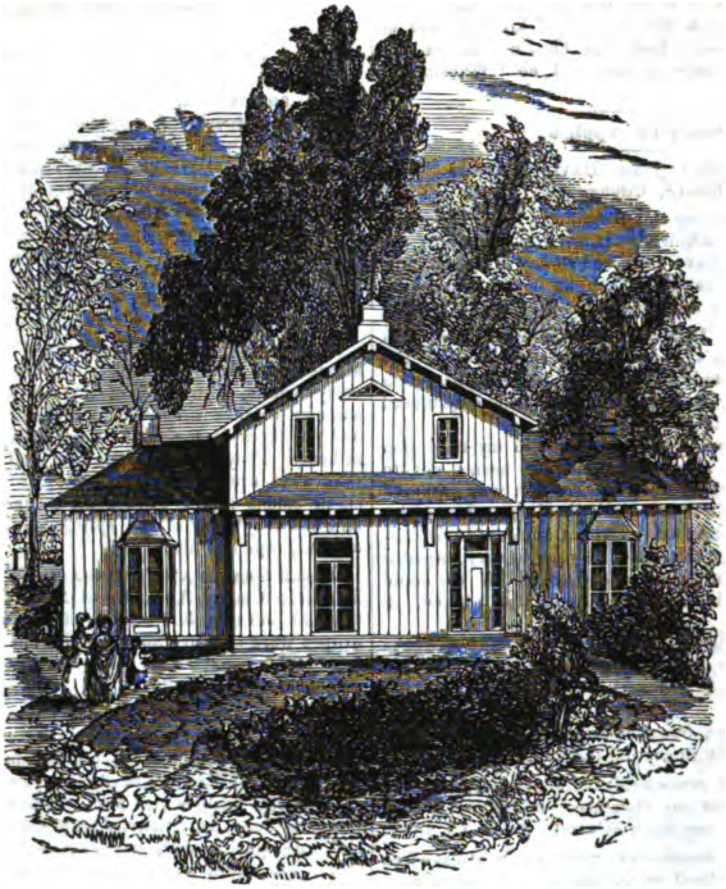
* Doubtless only occasional. ED.



CHEAP COUNTRY HOUSE

Rural Architecture.

Cheap Country House.

The accompanying plan of a house was designed by Mr. F. R. **Elliott**, of Cleveland, Ohio, and received a diploma and silver medal from the New-York State Agricultural Society, at its January meeting, 1849. We copy the cut, and Mr. E.'s description, from the Society's last volume of *Transactions:*

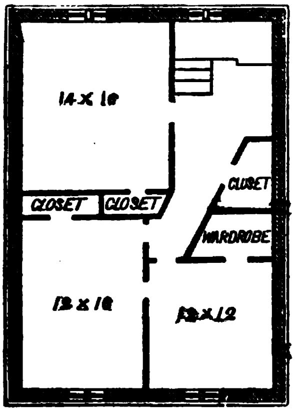
The building is particularly designed to point either north or west, and should, if possible, be placed upon a slight rise of ground from the adjoining public highway, or surrounding grounds.

The value of land in the country, as compared with the disadvantages of basements for kitchens, etc., should not receive a thought, and while this plan may be said to cover a large area of ground, I trust to be able to show that it can be built for a much smaller amount of money, than any plan of equal convenience, room and character yet published. A free circulation of air, connected with large and convenient rooms, are material points, and in this they may be had. The size of cellar may be according to the wishes of the builder, but my estimate and plan is for a cellar only under the wing in which is the kitchen, that being of size sufficient to hold all vegetables, etc., that will be required for the consumption of a large family. Vegetables for stock should, for easy access in feeding, as well as the injurious effects sometimes resulting from a too large quantity stowed in the house cellar, always be confined to the barn cellar.

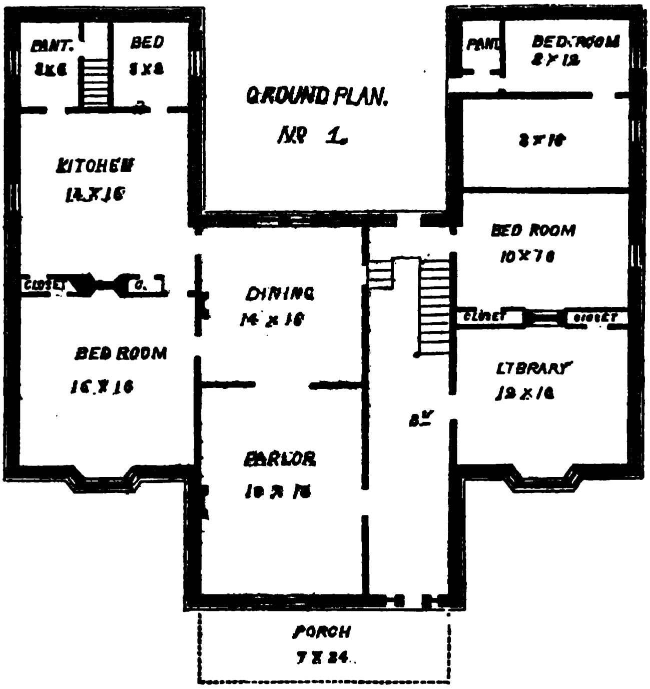
The main house is 24 by 32 feet, with 18 feet posts, and having a porch 7 feet wide in front, supported by brackets. The wings are each 16 by 40 feet, with 11 feet posts, and falling back 12 feet from the front of the main building. Of the first story front, the main building has a single panel door, and one large window, opening each way inside upon hinges. The wings have each an oriel or bay window, projecting one foot, and having the centre lights of glass hung upon hinges, to open inside. The second story front, the two windows like the one below, are divided by a heavy style, and open inside. The covering, as indicated in the eleva- is to be of inch pine boards, that have been run through a planing machine, and cut to a width and thickness. These battened with half inch stuff, three inches wide. As the lower story of the main building, as well as wings, are all designed to be 11 feet high in the clear, it is evident that the best length of boards will be 12 feet, as they will allow of no waste.

The estimate of cost here given is for plain but good work. No mouldings, turnings or carvings, as all such only add to the labor of the housewife in keeping them clean, and are really no ornament, as taken in keeping with the other articles usually accompanying the country.

The fire place in the parlor is designed to be carried to a level with the chamber floor. and then carried ho-



SECOND FLOOR
NO I.



rizontally along the side of wall until it reaches the partition of chambers, when it may rise diagonally to the centre. Some may prefer a sheet iron flue, which could, like a stove pipe, be removed from the chamber during the summer months. Some may prefer to have the chimney rise direct, as tending to break the uniformity, which, by the way, seems among architects of the present day to be more the intention in their designs, than to give positions suited to the real wants of daily life.

That my estimates of cost are correct, I can only say that they are such as I have contracted in building this house, and are therefore reality, and not fiction or supposition.

Estimate of Cost.

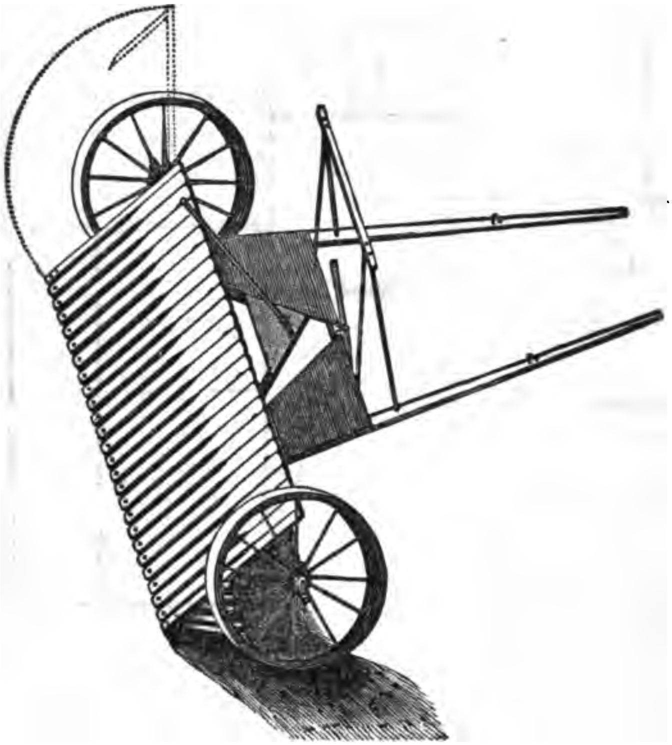
1,000 feet hewed timber, at 2c.,	$20 00
4,134 " inch pine boards, planed, 10¾c.,	44 65
4,100 " roof boards, at 7c.,	28 70
1,200 " ½ inch, for battings,	12 00
500 " 1¼ inch, second clear, at 13c.,	6 50
200 " 1¼ " " say,	3 00
182 " 1¼ " for water table,	1 75
21,000 shingles, at $2.50,	52 50
968 feet, or 66 pieces, 4×4 scantling, 11 feet long; 320 feet, or 24 pieces, 10 feet long; 171 feet, or 8 pieces, 16 feet long; 168 feet, 3×4, 14 feet long; 576 feet, or 32 pieces, 2×4, 18 feet long; 880 feet, or 80 pieces, 2×4, 11 feet long; 176 feet, or 16 pieces, 2×4, 11 feet long; 184 feet, 2×4, long as possible; 118 joists, 3×8, 16 feet long; 16 joists, 2×8, 10 feet long; 54 joists, 16 feet long—for ceiling joists. Estimate all the scantling at,	50 00
Joiner work, to frame, enclose, make sash, &c.,	200 00
Glass and putty for windows,	20 00
Nails,	15 00
Door and window swings,	10 00
	$464 70
This is exclusive of the cellar wall and underpinning, which, with the chimneys, may be (inclusive of materials,) made for,	125 00
Flooring,	20 00
Inside joiner's work and lumber,	150 00
Lath and plastering,	200 00
	$959 70
Extras,	40 30
	$1000 00

This of course, does not allow for the digging of cellar or hauling of lumber;—that must be calculated according as the distance is far or near.

A green-house is, of course, extra; but if the house fronts to the north, it might be constructed, in rear of the dining-room, at a small expense—say thirty dollars. The front wall would of course, be all required, and that should or could be done with four-inch scantling, let into a sill of six by eight, boarded on each side, and filled with saw-dust or tan-bark;—the sash and roof being most of the expense. The heat could be taken from the kitchen, if a stove was there used.

Ancient Price of Agricultural Labor.—In the year 1352, the 25th of Edward III., wages paid to hay-makers were but 1d. per day; a mower of meadows 3d. a day, or 5d. an acre; reapers of corn, in the first week in August, 2d.; in the second, 4d. per day; and so on until the end of the month, without meat, drink, or other allowance, finding their own tools. For thrashing a quarter (about nine bushels) of wheat, 2½d; a quarter of beans, peas, barley, or oats, 1½d. By the 13th of Richard II., in the year 1389, the wages of a bailiff of husbandry was 13s. 4d. a year, and his clothing once during that period at most; a carter, 10s.; shepherd 10s.; ox-herd, 6s. 8d.; cow-herd, 6s. 8d.; a day laborer, 6s.; a driver of ploughs, 7s. In 1444, the 23d of Henry IV., the wages of a bailiff of husbandry were 23s. 4d. per annum, and clothing to the price of 5s., with meat and drink. In time of harvest a mower had 4d. a day, and without meat and drink, 6d.; a reaper or carter, 3d. a day—without meat or drink, 5d.; a woman laborer, and other laborers, 2d. a day—without meat or drink, 4½d. a day. By the 11th of Henry VII, 1696, there was a like rate of wages, only with a little advance.

Time of Cutting Hay.—John H. Garnet, of Va., cut 75 stalks of timothy grass immediately after "the dropping of the bloom," and again 75 when the seed was fully ripe; both were of the same length, and cured alike. The greenest cutting was found to weigh 121 grains more than the other.



77—INDEPENDENT HORSE RAKE.

The Farmer's Note-Book.

Independent Horse Rake.

This rake was patented by CALVIN DELANO, of East Livermore, Maine, Feb. 27, 1849. It is fitted to the wheels of a single horse wagon, and tended by a man or boy, who can stand on the platform, forward of the rake, drive the horse and gather the hay with certainty and ease. By placing the foot on a lever attached to the axletree, the hay is discharged in winrows. Each tooth acts separately and independently, its head being suspended on a rod or hinge, over the axletree, one tooth being attached to each head. It is applicable to rough and smooth land, and applies with equal pressure on each kind of surface.

This rake has been considerably used in Maine, and several of the best farmers in that state have given certificates expressive of their satisfaction with its operation. For particulars address R. H. CHASE, Albany,

Rust, Osage Orange, &c.

EDS. CULTIVATOR—I do not propose to instruct any one, but as you do not often hear from this part of the country, it may not be out of place to allude to a few items of consequence here.

RUST.—In common with most parts of the Great West, we have been visited with this malady. Never, in this county, and perhaps I may add in this part of Ohio, as well as in the adjoining counties of Virginia, has there been more wheat in the ground, rarely has it looked better, and probably, in no previous instance, have we counted with greater assurance upon the avails of this crop—than this year. Yet almost in a day, our crops were cut off, and some of the most promising fields in the country have not been cut. There will not, with us, be more wheat threshed than was sown. It is not so bad every where, and we are glad of it.

We have not yet been informed of either the true cause or adequate remedy; but are resolved to try again; sow less ground and prepare it better.

The Mediterranean seems to be the favorite variety here, at present. Our millers, who first condemned it, now understand how to grind it, and like it very well.

Nothing will conduce so much to the improvement of our wheat crop, as the free culture of clover.

OSAGE ORANGE.—Our farms along the Ohio and Muskingum rivers, are subject to inundation, by which we lose a large amount of fencing. Having suffered in this way, I procured last spring 4,000 plants of this shrub from Mr. Bateham of Columbus,—one-half for myself, and the other half for a thrifty English farmer, who is my nearest neighbor.

The plants were long coming, and consequently somewhat injured, and we lost some 500. Each of us set about a fourth of a mile along the Muskingum. His ground had been previously prepared by throwing up with the spade in winter, and consequently, the plants have grown rather better than mine. My plants are now from a foot to four feet in height.

We have both of us, come to the conclusion, that we might have gained a year by pinching off the tops when they were six inches in height, early in June, as it would cause each branch to send out six or eight lateral twigs, which in turn might be shortened in July, and thus secure a good and compact hedge, of one to two feet in height, the first year, and by adopting a similar course the second produce a hedge. This may not answer everywhere, but upon our soil and in this climate, with good culture, it probably will. We were led to think of it by plants being accidentally broken off.

The only objection which I perceive can be urged against this method, is that it produces smaller branches. True, it dwarfs the plant, but with us, the greatest objection to the orange is, that is is too luxuriant and rank. This seems to make it finer, and better adapted for hedges. We expect to set more in the spring, preparing the ground in winter.

MUSTINESS.—In a humid climate, along water courses, and upon moist soils, most families are more or less troubled with a musty, offensive dampness. It is frequently so great as to render clothes unpleasant to wear. Drawers and closets are affected by it, and even large rooms, not frequently ventilated, are sometimes so unpleasant as almost to take the breath away on entering. But it is in the pantry, milk-room and cellar, that it is most frequently found. Victuals acquire an unpleasant taste; milk becomes unfit for use, and butter loses its flavor. Now, whatever other causes conspire to produce this result, is it not probable that the presence of an undue amount of carbonic acid gas is the chief cause?

THE REMEDY.—Would not science dictate something which would absorb the noxious gas? What better than the leaves of plants? There are, doubtless, many who resort to this method; but there may be some, who, like myself, never thought of it. Every few days place a few branches of any good trees or shrubs in the infected apartments. You will probably find the air much improved.

STATE FAIR.—Many of us greatly regret that we have no State Fair this fall. You may expect a large Ohio delegation in New-York, and a kind Providence permitting, next year we will try it in Ohio. DARWIN E. GARDNER. *August* 20, 1849.

NOTE.—The mustiness to which our correspondent alludes, can be remedied by placing lumps of fresh burnt lime in the infected apartments. The lime, in the process of slaking, absorbs the carbonic acid gas. EDS.

Ammonia in the Atmosphere.

At the convention of the American Association for the Advancement of Science, held at Cambridge, Mass., in August last, Prof. E. N. HORSFORD read a valuable paper on the "Moisture, Ammonia, and the Organic Matter of the Atmosphere."

In relation to moisture, Prof. H. gives the following as some of the results to which his observations tended:

1. Other things being equal, the moisture is in general proportion to the temperature.

2. Slight variations of temperature are not accompanied by corresponding variations in the quantity of moisture.

3. Great variations in the quantity of moisture may take place while the temperature and altitude of the mercurial column remain constant. The quantity of moisture has even doubled in the course of an hour, although the temperature became reduced.

4. As a general remark, the moisture on the same day seems to depend chiefly on the direction of the wind.

5. The least quantity of moisture was observed during a N. W. or N. N. W. wind; the largest during a S. W. or S. S. W. wind.

6. The former occurred on the 12th March, and the latter on the 23d of June. The quantity on the latter day was to that on the former as more than fifty to one.

To test the quantity of ammonia in the air, Prof. H. used an apparatus of his own construction. He says—"The object in view in the arrangement of the apparatus was to provide that the air should, by means of an aspirator, be transmitted through a constantly renewed atmosphere of hydrochloric acid vapor. To this end a series of tubes containing asbestos drenched with hydrochloric acid, and terminating in a potash bulb tube containing diluted hydrochloric acid, were connected with a safety tube, which was connected with an aspirator. Through this apparatus, a known volume of air was transmitted. At the conclusion of the experiment, the apparatus was thoroughly rinsed with distilled water, and the ammonia determined in the usual manner with bichloride of platinum.

"To find a normal atmosphere two determinations were made from the end of Foster's wharf, which, in one direction looks out upon the Atlantic during the prevalence of a strong east wind. A second determination was made in a court called the 'Half Moon,' communicating with Broad street, Boston, an area of crescent form, about 180 feet by 70 feet, surrounded by brick buildings of five and six stories in height.

"In these buildings it was estimated there were not less than a thousand individuals, most of whom, in extreme poverty, have within a few months arrived from Ireland. This locality was pointed out by one of the assistants of the City Marshal, in reply to the request that he would direct to the worst habitable part of the city. In the centre of the court were the common vaults and sinks serving this large population. The atmosphere of this court, which was offensive in a high degree, was not found to be distinguished on account of its ammonia, above that of the ocean in an east wind.

"Two determinations were made in Cambridge, one during the prevalence of an east wind, the other during a west wind. The quantities of ammonia in the east wind, as ascertained from the above determinations, vary very considerably from each other. Great care was taken in the preparation of the reagents employed and the ammonia in the hydrochloric acid, water and bichloride of platinum previously ascertained. Still such was the discrepancy between the author's results, that he forbears a statement of the quantities ascertained, only so far as to remark, that they very greatly exceed those obtained by Fresenius in his recent determinations at Wisbaden.

"Organic matter has been observed in the air by several scientific men. Henry and Chevalier have detected acetic acid, and probably hippuric acid, in the atmosphere of a stable.

"On transmitting a large volume of air through the ammonia apparatus, supplied with hydrochloric acid, and evaporating in platinum over a water bath to dryness and ignition the products of a thorough rinsing, no blackness was observed. On transmitting a similar large volume through a similar apparatus supplied with caustic potassa, previously found to be free from organic matter, and treating as above, the residue blackened. This goes to show, as far as a single result may, that the organic effluviæ in the air are of acid character."

Litigation.

I cordially agree with the remarks of a "FARMER" on Litigation in the last *Cultivator*; his admonitions are excellent; and it is well that he has called the attention of the commmunity to the subject.

Persons very peaceably disposed, however, in resisting an oppressor, are liable to be drawn into a lawsuit. Such an instance is fresh in my memory; and we may ask if our judiciary system is calculated in every particular to protect an honest man without the risk of his being ruined? No—it is quite otherwise from its excessive expenses; and though many improvements have been made since we emerged from under a monarchy, yet enough remains of the old fabric to show that the good of a *few*, and the disregard of *the many* have been leading ideas in the minds of most statesmen.

If this remark should seem too censorious, let us consider the provision for jury trials in civil causes, which should never have been introduced. No person more highly appreciates a jury than I do, when life or liberty is at stake,—interposing itself between the government and the accused, for judges in the olden time were more or less suspected of leaning towards the side of power, and the same thing may occur again. But a jury trial in civil causes has no such advantage. A verdict of *Not guilty* is final; but *civil* verdicts are of no certain value. In the former case, a jury is the palladium of liberty, but in the latter, too often the instrument of injustice. In my view it is worse than useless; and this opinion *I know* is held by some of the soundest lawyers in the State. Let us look at the subject deliberately. Twelve men are empannelled to settle a dispute according to the laws of the land; but the judge has first to tell them what the law is, under which they have to act. Now, if they bring in a verdict according to his explanation, what have they done to justify all the expense of bringing them together, and keeping them there? Not one fact have they ascertained that the witnesses would not have established without them; and their verdict, the judge with one-twelfth part of the parade, would have made up and recorded. On the reverse, if they disregard the law, no earthly good is gained,—for the losing party is encouraged to appeal to a higher tribunal, where wrong-headed jurors never intrude.

But this statement is only a part of the story. When a man is sick, does he send for the blacksmith? When he goes to law, does he employ the carpenter? Yes, as a juror! and the cases are equally inconsistent. Now if the cobbler ought to stick to his last, then lawyers ought to compose the jury in civil causes. But how is it? The farmer is taken from his field, the mechanic from his workshop, and the merchant from his counter—men whose minds have been occupied with far other studies, and whose perceptions have not been sharpened in the school of chicanery. Well, the court opens, and most of its time is taken up by counsel,—on one side in attempts to impose on the credulity of the jury,—and by efforts on the other side to dispel the mists that befog them. Hence comes the minute examinations of witnesses, that have no bearing on the main question—anything to divert attention from a weak point, to puzzle and confound; and hence the four and five-hour speeches, calculated

> —" to make the worse appear
> The better reason "—

but which would not be offered to the judge, were no jury within hearing. He, poor man,—the very exemplar of "Patience on a Monument," must bear it as best he may, for impartiality is a first rate virtue in a judge. Better would it be to dash such sophistry aside, and let the light of truth beam at once on the contending parties.

Against abolishing this cumbrous system, will be opposed the selfishness of some, and on the prejudices of many; but I trust that a fair exhibition of its abuses, before an enlightened people, will gradually work out a remedy.

We want Courts of Conciliation, where those who intend to litigate are *bound to hear advice* before commencing a suit, though *not compelled to take it*; and in this respect we are not far behind the Danish (and perhaps Spanish) colonies in the south. A clear statement of the law as applied to the case, would often operate on a contentious spirit, like oil on the troubled waters; while on the contrary, in the present state of things, an unprincipled lawyer, eager for his fees, often excites such a spirit to a high degree; and inflicts a deep injury not only on the individuals immediately concerned, but also on their neighbors and the public at large. An Observer.

Grass Lands in Kentucky.

Eds. Cultivator—A young friend of mine asked my advice in laying down to grass a particular field, which he wished to put in rye this fall; I answered his letter. He showed my letter to Mr. Weissenger, one of the editors of the *Louisville Journal*. It is introduced by some remarks from Mr. W. He and myself are at issue as to fall plowing. I adhere to the opinion expressed in my letter to Mr. O. My practical knowledge is not sufficient however, to induce me to maintain it, against the evidence of one more experienced. You will oblige me by giving me light on this subject, either from yourself, or from those in whom reliance may be placed. Lewis Sanders. *Grass Hills, Ky., July 27, 1849.*

The following is the letter of Mr. Sanders, above alluded to:—

Mr. R. J. Ormsby—*Dear Sir*:—In laying down land to grass, either for pasture or for the scythe, it is very important to have it thoroughly and uniformly set, otherwise full benefit is not derived from the land. If the seed comes up in patches, leaving one-fourth to an eighth of the ground bare, which is frequently the case, a corresponding loss ensues. A field rightly managed will graze one-third to one-fourth more stock, and yield hay in proportion, than one that is slovenly put in.

Sowing grass seed late in the summer or fall does best, if the succeeding winter is favorable, but the great uncertainty has caused me to abandon fall sowing, as the roots do not attain sufficient strength to resist the frosts of winter.

My observations and experience lead me to disapprove of breaking land in the fall for spring culture. The earth should not be left *naked* at any season, but when so exposed in the summer, nature protects herself by a growth of weeds or some sort of herbage as a clothing. This she cannot do in winter, but is left naked, exposed to the sun, winds, rains and frost, and alternate thawing and freezing for months.

The richest, the most fertilizing particles of the soil are the lightest, consequently the easiest carried off by the rains, melting of snow, and the winds, causing, in my opinion, a much greater loss of the food for plants than is gained by pulverizing the earth from freezing.

My advice is to break up your ground late in the winter, or as early in the spring as the frost will allow. You ought certainly to *trench plow*; that is, a second plow, *following the first in the same furrow*, each to be as deep as the team can draw it. I use *three horses* to plow, geared *abreast*. This is the right preparation for *corn*, or for any spring crop. The ground should then be well harrowed, using a heavy harrow—having your ground in proper order for the reception of small seed, mark it off in checks, that is, each way. Sow half the seed in one way, and cross it for the other half, getting thereby, a more uniform *cast*, leaving no bare spaces.

For meadows, for farm purposes, or for permanent pastures, I sow orchard grass seed and red clover seed only—one and a-half bushels of the former and four pints of the latter to the acre, the seed to be sowed separate, but at the same time harrowed in with a very light harrow, or carefully brushed in. Towards the end of May or early in June, a variety of weeds will make their appearance; the whole of the ground must then be passed over with the scythe, cutting everything as smooth as may be, grass and all.

Keep off every kind of stock till the fall; then it will afford fine grazing for calves.

A compliance with these suggestions will give you the best return for your land, either for meadow or permanent pasture; but if you prefer sowing on winter grain, sow the same sort of seed, increasing the quantity of clover seed fifty per cent. Sow in January or February, but not after the 1st of March, if sowed on winter grain.

Or you may sow on oat ground immediately after the oats are sown. Sow orchard grass and red clover as on winter grain; if the oats should fall or lodge, cut them off close to the ground with the scythe, removing them immediately. Sowing seeds on winter grain or on oat ground will in most seasons succeed so as to afford some grazing, but ought not to be relied on, if you want a full crop of grass for any purpose.

Avoid *red top*; let it not come on your land, unless you have some swampy ground. Upon uplands it is the poorest of all the grasses. It vegetates late, is a great *intruder*, will take hold and spread over the farm, and is of the least value of any.

Have nothing to do with timothy, unless you wish to sell hay as an article of commerce. For this, it is the best, but for hay, to be fed on the farm, it is worthless, and for grazing it has not a tithe of the value of orchard grass.

The remarks of the *Louisville Journal* in relation to Mr. Sanders' letter, are as follows:—

We are pleased to be able to lay the above letter before our readers. It may be read with instruction by old as well as young farmers. Mr. Sanders' practice of sowing grass alone and early in the spring is undoubtedly the correct one. We think it more bungling to sow with small grain, or to sow at any other season. It is the only method to *insure* a good stand and to insure a good swath the first season. We think, however, that there is a great advantage in breaking up the ground late in autumn or in the early winter. This makes sure of getting the ground prepared for an early sowing, and besides it is the established opinion that the soil is ameliorated by the action of the air and the frosts of winter. This is especially true if trench plowing is adopted; and in this case, there certainly can be little loss from the action of the wind and running water—not so much as if the ground were not plowed at all. The grass seed should be sowed very early, *immediately* after the last harrowing, and just before an expected rain. Two or three harrowings are not too much, and the harrow should always immediately precede the sower, that no wild grass or weeds shall germinate before the sown grass. If sown under the best conditions, orchard grass and clover will take entire possession, and keep it, to the exclusion of all weeds. An excellent method to insure this exclusion, is to soak the grass seeds for twenty-four hours, in which case ashes or lime may be mixed through the seed, after they are drained. This will prevent their sticking together. But soaking is not necessarry if the seed can be sown just before a rain, and just after the harrow. But care must be taken that the seeds be not covered deep, or the weeds will still get the start, and many of the grass seeds will never germinate. Therefore, the surface of the earth should be very smooth when the seed are sown, and the harrow should by no means be used to cover the seed. Brush, as recommended by Mr. Sanders, may be used, but it is much better to draw over the soil a smooth surface of boards like a large door, with the battens uppermost. The horse can be attached to this platform by means of a rope, passing through one corner, and the driver should stand upon the platform. In this way, the soil is smoothed and finely pulverised, and the seeds are but lightly imbedded, and they spring up before the weeds, and prevent the germination of the weeds.

Oxen vs. Horses.

Edward Stabler, Esq., of Montgomery county, Maryland, writes to the editor of the *Plow, Loom and Anvil*, that in 1822 or '23 he commenced the substitution of oxen for horses on his farm. He began in midsummer to break up a field for wheat. For a day or two the oxen suffered greatly with the heat, in the middle of the day, but by rising early, and resting two or three hours at noon, and feeding on dry food, he was able to plow nearly as much with a yoke of oxen as with a pair of horses, and the work was quite as well done. The horses consumed about one bushel of grain per day and the oxen none. He found the result, after a thorough trial, so much in favor of oxen, that he has ever since continued their use. For many years there was not a furrow plowed on his farm except by oxen. He observes that oxen, if properly broken, quite as readily, if not more so, take to and keep the furrow, as horses. His rule is to keep two yoke of oxen on the farm to one pair of horses. He well remarks, that—"to judge of the capabilities of the ox, by the badly-used, houseless, over-tasked, and half-fed animals we sometimes see in the yoke, is doing him great injustice. Treat the horse in the same unfeeling manner, and where would be his high mettle and noble spirit? He would speedily arrive at a premature old age, valueless to his owner, and a cast-off to feed the carrion crows. That the ox can better stand this harsh usage, is certainly no valid or sufficient reason that he should be subjected to it. Use him with equal care and humanity, and he will just as certainly, and with more profit, repay it to his owner."

Points of the Horse.

A point of great importance in the fore-leg of a horse, is the proper setting on of the arm, which should be strong, muscular and long. By the length of this part in the hare, added to the obliquity of the shoulder, she can extend her fore-parts farther than any other animal of her size; in fact, she strikes nearly as far as the greyhound that pursues her, by the help of this lever. The proper position of the arm of the horse, however, is the result of an oblique shoulder. When issuing from an upright shoulder, the elbow-joint, the centre of motion here, will be inclined inward; the horse will be what is termed "pinned in his elbows," which causes his legs to fall powerless behind his body. A full and swelling fore-arm is one of the most valuable points in a horse, for whatever purposes he may be required.

If sportsmen were to see the knee of a horse dissected, they would pay more attention to the form and substance of it than they generally do. It is a very complicated joint, but so beautifully constructed that it is seldom subject to internal injury. Its width and breadth, however, are great recommendations, as admitting space for the attachment of muscles, and for the accumulation of ligamentous expansions and bands, greatly conducive to strength. The shank or cannon bone, can scarcely be too short. It should be flat, with the back sinews strong, detached, and well braced. This constitutes what is called a "wiry leg." Round legs are almost sure to fail.

As to the size of a horse, it may be remarked that no very large animal has strength in proportion to its size. That the horse has not, the pony affords proof, if any other were wanting. There have been many instances of horses, little more than fourteen hands high, being equal to the speed of hounds over the strongest counties in England. For example, Mr. Wm. Coke's "pony," as he was called, many years celebrated in Leicestershire.—*Abridged from an Essay on the horse.*

Cultivation of Orchards—Temperance.

Eds. Cultivator—Among the various kinds of business which are followed for a living, those in which the morals of the community are most guarded, are the most important. That men can be honest and moral in every branch of honorable business is true; but that some kinds of business present stronger temptations for over-reaching than others, is also true. I think the business of farming offers fewer inducements for immoral and dishonest acts, than any other followed. That there are farmers who are vicious in their habits and dishonest in their acts, is admitted. Generally, however, good order and sobriety are maintained by the agricultural population of our country.

Since the great temperance reformation came up, the habits of farmers, as well as those of every other class, have improved. It is but a few years since alcoholic drinks were thought necessary to the laborer in the season of haying and harvesting. But a great change has taken place in this respect, and but few farmers persist in the use of such drinks.

Cider-making and cider-drinking have been mostly confined to New-England and New-Jersey. When cider-drinking went out of fashion, the orchards at the west were mostly young, and they were grafted for the production of market fruit. But in New-England, orchards, chiefly of natural fruit, have been growing for a century and a-half. The apples, our fathers thought were just fit for cider and for nothing else; but it has since been proved that they were excellent for stock through the fall and winter.

Twenty and twenty-five years ago, two-thirds of the farmers' time in autumn, was spent in gathering apples and making cider. This caused a great neglect of other crops, and was time thrown away. The farmer filled his cellar with the cider, and carried what was left to the "still," to be made into cider-brandy. It was not an uncommon thing in Connecticut, for the farmer to have, not only a cider-mill, but a distillery also; and even to this day, I am sorry to say, there are some of these mills in operation—preparing poison and death to be scattered through the community.

There are farmers engaged in this business who claim to be moral men; but I would ask them, if by pursuing this business, they are sustaining good order and improving the morals of the community? If not, the business should be abandoned at once. I know the influence of self-interest—there is no interest like it. Of course it is this principle—the desire of making money—that induces farmers to engage in this injurious traffic; and yet I am far from believing that this is a money-making business. The extreme low price at which cider sells, will hardly pay the expense of gathering the apples and making the cider. As to the price of cider-brandy, I know nothing; but I know something of the moral desolation that prevails in neighborhoods where it is extensively sold and drunk.

In the early stages of the temperance reform, some farmers, who had great zeal for the cause, cut down thrifty orchards. This was a great mistake, as was afterwards seen. Of all fruits raised in New-England, the apple is the most useful. The best course which farmers can adopt with their old orchards, that bear only natural fruit, is to cut off the old top, and graft on a new one, with kinds suitable for market. Let all old and unthrifty trees be cut down. The healthy trees, with proper attention, will soon come into bearing.

As to a market for fruit, there will always be a ready one for a century to come. L. Durand. *Derby, Ct., August* 1, 1849.

Transmutation of Wheat into Chess.

Eds. Cultivator—The transmutation of wheat into chess, is doubted by many; and, from your remarks in the July number, I infer that you regard the matter as merely speculative, without any facts to warrant it. To my mind this question is most conclusively settled by evidence which has come under my own observation, and which cannot, in any way, be contested or set aside. With a view of settling this question, I send you the following fact, which you may dispose of as you think fit.

Many years since, while I was yet a boy, I aided my father in the cultivation of his farm. He had a field of about ten acres which he concluded to sow in wheat. The ground was well manured in the fall and the wheat sown at the usual time. It came up remarkably fine and looked exceedingly well, during the fall and throughout the spring. It was pastured, I believe, in the spring by the calves, in order to prevent it from becoming too rank and lodging. The time of heading at length arrived, but judge of the astonishment to find that this promising field of wheat was now one *luxuriant crop of chess*—every stalk of wheat, with but few exceptions, was converted into a head of chess. There it stood; the wonder and amazement of all who examined it.

And now what was to be done with it? was the next question. It was finally concluded to mow it, before it would get ripe, and feed it to the cattle for hay.

This was an operation which I witnessed with my own eyes, so that I had every opportunity to satisfy my mind of the truth of this fact by personal observation. From that time to the present I have never had the least doubt but what wheat may change into chess. Under what circumstances this may take place, or what the cause may be to produce this change, I do not pretend to say. I advance no theory or explanation of this remarkable fact. It is an undoubted truth which cannot be called into question. Nor can you explain it away upon the supposition that the chess might have sprung up from the ground, and finally, supplanted the wheat. This assumption would only be throwing the difficulty further back, and not at all remove it. It would amount to this, *the seed was wheat when sown, but it came up chess*. It had been previously cleared by a fanning process, of every appearance of chess, so that none, or very little was sown with the wheat, and the ground had been a clover field.

You perceive, therefore, that this question is not "without facts to warrant it," but is substantiated by the "most unequivocal and positive evidence;" for I consider that *one fact* is enough to establish the question beyond doubt. A Gleaner of Agricultural Knowledge. *Johnstown, Aug.* 10th, 1849.

We are willing to take the circumstances of the above supposed case of transmutation, just as they are related, protesting, however, against the conclusion. We are willing to admit that the ground spoken of was sowed to wheat which had "none or very little" chess among, it, and that when the crop was cut, there was but very little wheat in it. But after these admissions the question rises—Did the chess come from chess, or did it come from wheat? Which is most reasonable, or most in accordance with known natural laws? All observation teaches that plants reproduce their own species—that they do not produce those of distinct genera or species. Now there is no necessity of violating this law to account for the production of chess in the above case; the thing can be done much easier in various other ways. The seed of the chess may have been partly carried on the ground in the manure, and more or less of it may have remained in the ground from former crops or plants of chess which had grown there. Chess is more hardy than wheat, and when the latter died out, the former spread and occupied its place.

If our correspondent should visit any section of country and find it occupied by *men*, and on repeating his visit, after an interval, should find it occupied by *monkies*, he would hardly attempt to account for the change on the supposition that the men had been "converted" into monkies—even though he could not tell where the latter had come from, and yet this notion would not be more at variance with known physiological laws, than that of wheat changing to chess. Eds.

Crops in New Hampshire.

Eds. Cultivator—In regard to the crops in this vicinity, there is as a general thing, no good cause for complaint. It is true that on light sandy land the severe drouth has caused the grass and grain to be very light, but on our hill land it has been otherwise. There has not been an average yield of hay, probably not more than two-thirds as much as was cut last year; but last year's crop was unusually large. Grain is good, wheat especially so. On account of the drouth, the straw is short, but the heads are well filled and the grain plump. I think there has not been so good a yield for more than ten years, excepting in 1846, which was about the same. The abundant rains that we have had since the 10th of August has been just the thing for corn and potatoes; and they now promise well. As far as we can judge, there will be a fair crop of these two valuable productions. I have not heard of any appearance of the potato disease. There is an uncommon scarcity of fruit. W. L. Eaton. *East Weare, N. H., September* 3, 1849.

Hybridization.

A valuable article appeared sometimes since in the *London Horticultural Magazine*, on the subject of hybridizing plants. Many of the observations of the writer are particularly deserving attention, and we offer some extracts, with a few additional remarks:

"In a practical point of view, the power of producing hybrid plants is one of the most important means which man possesses of modifying the vegetable races, and adapting them to his purposes. To it we owe some, indeed many, of our most beautiful garden flowers, as well as the most valuable of our fruits and vegetables.

"The operation of hybridizing plants, consists in fertilizing the stigma of the flower of one plant with the pollen of another of different though allied characters. The effect of this when the cross fecundation is actually effected, is to originate a new form, usually possessing properties and characters intermediate between the parents.

"It is, however, only between species in which the degree of relationship is somewhat close, that this intercourse is effected; and as a rule, those plants which accord most fully in general structure and constitution, will most readily admit of artificial union. Species that are very dissimilar, appear to have some natural obstacle which prevents mutual fertilization; and *this obstacle becomes insurmountable in the case of very different genera.*

"It has been thought that a law, very similar to that which obtains among animals, also regulates the production and fertility of mule plants; and so far as observations have been made and recorded, this seems, as a general rule, near the truth. Thus two distinct species of the same genus of plants will, in many cases, produce an intermediate offspring, perfect, as far as regards the exercise of the vital functions, but defective as regards the power of perpetuating itself by a seminal process. Even when, in the first generation, this sterility is not apparent, it becomes so in the second, and less commonly in the third or in the fourth generation. Such mules may, however, [sometimes,] be rendered fertile by the application of the pollen of either parent, the characters of which then become assumed by the offspring; in other words, the hybrid form reverts to one of its parents."

The idea above alluded to, that a similar law prevails among plants and animals, in regard to cross-breeding, is supported by many facts. The sterility of hybrid plants is strikingly analogous to the sterility of hybrid animals—as the offspring of the ass and horse; and various hybrids among birds—the produce of the wild (Canadian) and domestic goose, of the Muscovy and common duck, &c. The organization of these hybrids, (as is remarked in regard to plants produced by cross-fertilization,) seems to be perfect, except that they are defective in the power of procreation.

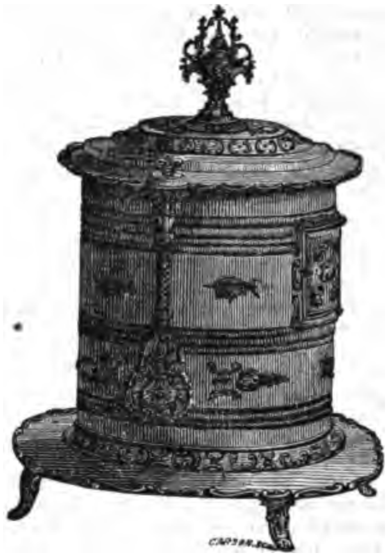
But this tendency to sterility is not confined in animals to the offspring of distinct *species*; it appears not unfrequently in cross-breeds from widely-differing varieties, and more or less in all individuals, which, from whatever cause, show a marked departure from the natural type. Hence the sterility of monsters, and a general weakness of the virile powers in all animals which have any particular organs, disproportionately developed.

Again, the characters of cross-bred animals, like those of cross-bred plants, are often imperfectly developed in the first generation; and there is for a time considerable tendency to "sport," or vary. Experience has demonstrated that this tendency may be chiefly overcome by long continued skill and judgment in selecting and coupling, and a new and well defined sort or breed ultimately obtained. Knight accomplished this in the production of various new kinds of cherries, apples, pears, and currants. The same thing has been done in this country with beans, peas, Indian corn, potatoes, turnips, &c. So in regard to animals; Bakewell and others have, by crossing, obtained new breeds of horses, cattle, sheep, swine, and poultry; some of which have proved of great value.

The writer above quoted offers various conclusions as to the results of crossing plants; one of which is, that "crossed plants being often less fertile, are in the same proportion more luxuriant, and produce larger flowers." Is there not something analogous to this in the rapid growth and thrift of animals, which are produced by what is called a "strong cross?"

Race's Self-Registering Stove.

We notice, in various parts of the country, that great and constant inconvenience is experienced by the unequal temperature of rooms heated by stoves. This inconvenience is still greater where sheet-iron stoves are used, which otherwise possess the advantage of saving fuel, and warming up quickly a cold room in the morning.



7 —Race's stove.

We have found, from some years of trial, Race's Self-Registering Stove, to possess all the advantages of heating a room from zero to summer heat in five minutes after a fire is kindled, and then maintaining this temperature with scarcely a degree of variation, throughout the day. With rather coarse wood, it needs no replenishing for hours together; and will keep a room warm all night without attention, except throwing in at bed-time two or three large sticks of wood. The register needs registering only to adopt the heat to the nature of the weather, which may perhaps be necessary once or twice a day, and is done in one second. As for economy, we obtain the same heat with about half the fuel formerly needed for a good hot-air furnace with eight drums and air-pipes a foot in diameter. One stove heats three rooms night and day, seven months, with about six cords good wood.

To prevent the rapid accumulation of soot, the pipe should be as nearly vertical, or with as few elbows as possible; and to avoid the dropping of pyroligneous acid, each joint of pipe should enclose, instead of fitting in, each piece above it. Puffs of smoke are prevented by putting in a moderate quantity of wood at once, so as to allow a very slight draught of air.

Ashes and Lime—Experiments.

Wm. H. Ross, of Sussex Co., Del., who has used over 40,000 bushels of ashes within the last five years, gives some of the result of his experiments, in the *American Farmer*. In one instance, ashes were applied to an exhausted field, cleared more than sixty years, and never manured. Squares of a half acre each were marked off for each experiment, the quality being alike. The following were the results, the ground being planted with corn.

25 bu. of ashes	per half acre,	gave	20 bu. ears.
50 bu.	"	"	20 bu. "
25 bu. of lime	"	"	15 bu. "
50 bu.	"	"	15¾ bu. "

Two squares, unmanured with either, each, 10 bush.

The second year, about the same rate of difference continued. In this experiment, 50 bushels per acre were found about equal to 100 bushels. But in all other experiments, 100 bushels of ashes were found better than 50, and 200 better than 100, although so large a quantity was not found profitable. But with lime, little difference could be perceived between 50 and 100 bushels per acre. In some instances, lime produced no good result. Ashes, on the contrary, invariably produced a decided benefit, whether on poor or rich land.

His farm, containing 400 acres of arable land, has doubled its products in five years, chiefly by the use of lime and ashes. But other manuring was found necessary.

The following experiment gave interesting results. A field of very poor land was manured, a part with mould from the woods 100 *loads* per acre; a part with ashes 100 *bushels* per acre; and a third portion with both. Where the ashes and mould were combined, the corn was more than twice as good as where the ashes were spread alone; the ashes alone gave corn 50 per cent. better than the undressed parts of the field; while the mould alone produced scarcely any sensible effect. A dressing of 100 loads of mould from the woods, 50 bushels of lime, and 100 of ashes, generally increased the corn crop more than 20 bushels per acre, and wheat in the same ratio; and so permanent are the effects of this mixture, that he believes its effects will be seen for 20 years.

The soil on which these experiments were made was chiefly sandy loam, with some clayey portions; on the latter, lime was found most beneficial. Similar experiments would doubtless give different results in other places, where the constituents of the soil vary in character and quantity.

Increase of Exports.—For the last four months of 1848, the exports of flour were about *seven times* as great as in the same corresponding period in 1847; of wheat, *seven times* as great; of corn more than eight times as great, and of meal. a little less.

Fattening Cattle in Virginia.

In *The Cultivator* for May last, we gave an extract from a letter received from Mr. Noland, of Virginia, in regard to fattening cattle. It appears that the "Agricultural Club of Albemarle" appointed a committee to make inquiries in regard to the business, and of their report we give the following abstract from the *Southern Planter:*

William Garth fattened 166 head, commencing 20th October, 1848.

Expenses.

150 bought at $27,	$4050	00
11 raised 4 years,	275	00
5 " 3 years,	100	00
Total cost,	$4425	00
Feeding of 91 at Birdwood Farm—		
2442 bushels of corn, at 40 cents,	976	80
300 " oats, at 25 cents,	75	00
965 " bran and shorts,	96	50
	$1148	30
Feeding of 75 at Midway Farm,	924	62
Cost ready for market,	$6497	92
Interest on outlay, expense of driving, charges in Washington, Baltimore and New-York, commissions, &c.,	1362	64
Total debits,	$7860	56
Total amount of sales in New-York,	8330	76
Profit in cash,	$470	20

Besides 1500 heavy loads of manure. Two hundred fattening hogs gleaned after the beeves, and half of their usual food was saved. The manure was applied to land that would not bring four barrels of corn to the acre. It was sufficient to have covered one hundred acres of the average land of the farm. Mr. Garth's statement was drawn up with great minuteness. Of course, we give but the outline.

R. W. Noland fattened 20 bullocks.

Cost, at $29.60 each,	$592	00
104 barrels of corn, at $2,	208	00
100 bushels of oats, at 25 cents,	25	00
200 " bran, at 10 cents,	20	00
Interest on outlay,	14	00
Total expenses,	$859	00
20 beeves sold at home for	998	14
Leaving profit, besides manure,	$139	14

W. W. Minor fattened 43 bullocks.

36 cost $26.53 each,	$954	08
3 cost $12.92 each,	64	60
2 old steers, estimated at	50	00
Interest on outlay,	32	00
Fed 22 bushels corn per head, and 20,000 lbs. of hay,	465	32
Total expenses,	$1566	00
Sales,	1586	93
Profit in cash, only,	$20	00
Besides 200 loads manure, worth	$200	00

Manuring by Pasturing Sheep.—Sheep usually select the dryest spot for the night, which thus receives an undue proportion of their manure. This is remedied in England by hurdles, but a simple and easy mode, stated by the Michigan Farmer, is to go into the field just at bed-time, and frighten the sheep from their accustomed resting place with an umbrella; they immediately drop in their tracks and remain till morning.

Sales at the State Fair.

Sales in stock, implements, &c., were made to a very large extent at the late State Fair. It is probable that property of various kinds to the amount of fifty thousand dollars changed hands on the show-grounds. This indicates that this feature of our exhibitions will have an important influence in sustaining them. It is the best opportunity for buying and selling which can be afforded, especially on account of the means of comparison which are here available.

We have received authentic accounts of but few of the sales. We are told there was a large trade in horses, and have heard of several pair of matched horses being sold at good prices—from $600 to $1000 each pair. The Morgan stallion General Gifford, was sold by G. A. Mason to C. W. & M. H. Ingersol, of Lodi, Seneca county, for $1000. Mr. Mason afterwards bought the Major Gifford, of Mr. Blodgett, of Chelsea, Vt. A fine three-year-old filly of the same stock was sold by Mr. Wier for $200.

A superior two-year-old colt, by Black Hawk, was sold by H. H. Hall, of Bridport, Vt., to David Deuel, of Shelby, Orleans county, N. Y. This animal attracted much attention. His dam was said to have been a cross of the English blood horse, and the colt in question showed the points of that stock beautifully blended with those of the Morgan, derived from his famous sire.

The sales of cattle in the different classes were extensive. Mr. Bell's short-horn bull, which took the second premium, was sold to Mr. Thorpe, of Albany, for $400. He is a fine animal. Col. Sherwood sold several bull calves at $100 each; Mr. Morris, of Morrisania, and Mr. Allen, of Black Rock, several cows and heifers.

In Herefords, Messrs. Sotham and Bingham sold several bulls and cows from $100 to $125 each.

In Devons there was a brisk trade. The splendid Devon bull exhibited by Mr. Gapper of Canada, was sold to Mr. R. H. Van Rensselaer, of Butternuts, Otsego county. We are glad that this fine animal has been retained within the state. Mr. Gapper's bull calf was sold to Hon. Mr. Mowry, of Rensselaer county, who also purchased a fine heifer of Mr. Stevens. Mr. Beck, Mr. Washbon, and others, sold calves and young stock at from $40 to $80 each.

We were informed that large sales in sheep were made by Messrs. Bingham, Blakeslee, and other breeders of Merinos, and that liberal sales of Leicesters were made by Mr. Miller, of Canada, as well South Downs by Mr. Wakeman, and others.

The dealers in implements also sold largely. The sales of Mr. Emery amounted to $1500 on the grounds, besides contracts to about $1000 more; and we learn that a good business in this line was driven by most of the exhibitors. The purchasers were from many parts of the country; many from the western states—Ohio Michigan, Wisconsin, Illinois, &c.

Albany & Rensselaer Horticultural Society.

The Annual Exhibition of this Society was held at Albany on the 19th and 20th of September. The show of fruits and flowers was decidedly the best ever made by the Society, and was, indeed, highly creditable to our cultivators, and encouraging to all interested in horticulture and floriculture. In fruits, we noticed the splendid collection of H. Vail, Esq., of Troy, embracing 37 varieties of pears, 28 of apples, 24 of peaches, 4 of native grapes, 4 of foreign do.,—all very choice and beautiful specimens. S. E. Warren, Esq., of Troy exhibited a very handsome collection of various kinds of fruit, among which were 15 varieties of plums, 11 of peaches, several kinds of nectarines, samples of figs, &c. The President of the Society, Joel Rathbone, Esq., exhibited fine specimens of grapes and other fruits. The display of peaches and plums was uncommonly fine. Among the former we noticed, besides those above mentioned, those offered by Mr. Kirtland and Mr. Aiken, of Greenbush, Mr. Prentice, Mr. J. S. Goold, Mr. E. Corning, Jr., and Mr. Thorpe, of Albany. The exhibition of plums was large and fine. The display from the noted garden of Mr. Denniston numbered 32 varieties, nearly half of which were seedlings originated by himself. Several of these are still unnamed, though from their peculiar and valuable qualities, well worthy of cultivation. Mr. McIntosh showed a large collection of fruits, embracing pears, grapes and plums. Among the latter was an excellent late variety, which we shall speak of again. Mr. Douw had a fine collection. among which were 15 choice varieties of plums. Dr. Wendell showed many kinds of pears, apples, &c. Many handsome specimens of plums, grapes, &c. were shown by Mr. Prentice, Mr. Platt, Dr. March and Mr. Cary. Dr. M. had specimens of the White Magnum bonum which weighed four ounces each.

Fine melons of various kinds were shown by Mr. Rathbone, Mr. Prentice, Mr. John Wilson, Mr. Goold, Mr. Kirtland, and Dr. Wendell.

There was a fine show of vegetables, which we have not room to notice in detail. The principal exhibitors were Mr. J. S. Goold, Mr. Prentice, Mr. John Wilson and Dr. Wendell.

The display of flowers was very brilliant—far better than was expected considering the severity of the drouth which continued into August. Beautiful floral candelabras were shown by Mr. Rathbone, a handsome and tasteful floral temple by Dr. Wendell, a rustic moss-covered cottage, by Mr. D. T. Vail, Troy, and very handsome bouquets of various forms, by Mr. James Wilson, Mr. Vail, Mr. Rathbone and Mr. Newcomb. Splendid collections of dahlias and other flowers were shown by Mr. D. T. Vail, Mr. Jas. Wilson, Mr. Newcomb, Mr. Dingwall, and others. A variety of dahlia called Beauty of Sussex, an elegant specimen of which was shown by Mr. D. T. Vail, attracted great attention.

Death of Rev. Henry Colman.

Most of the papers have already announced the death of our esteemed countryman, Rev. H. COLLAN. He died on the 17th of August last, at Islington, near London. He went out to England in May last, for the purpose of obtaining materials for the completion of a work on the institutions and social condition of Europe. Just as he was about to return, he was seized with a fever, and survived but a short time. He was widely known, both in this country and abroad, for the interest and zeal he had for many years manifested in the cause of Agriculture. We cannot at this time, particularise in reference to his writings on this subject, which have been voluminous and extensively read. As a man, he was esteemed wherever he was known for his benevolent spirit, and bland and easy manners. Various tributes to his memory have appeared from the American press, and the following extract from the London *Mark-Lane Express* will show the favorable light in which he was regarded in England:

"It is with extreme regret that we announce the death of Mr. Henry Colman, of Salem, Massachusetts, U. S. Mr. Colman had been resident several years in this country and upon the continent of Europe, whither he had gone for the purpose of acquiring a knowledge of European agriculture, and which he diffused through the United States by means of a work published in parts, and which he completed a short time since. Mr. Colman was personally known to, and had been entertained at the houses of many of our leading landed proprietors and tenant farmers. His moderate opinions and unassuming manners rendered him a general favorite with ourselves and many who will deplore his loss."

Death of Thomas Bates, Esq.

Eds. Cultivator—Allow me herewith to furnish you for publication, an extract of a letter I received from England, by the arrival of a recent steamer, addressed to me by Robert Bell, Esq., dated Kirkleavington, 22d August. He remarks—"It is my most painful duty to announce to you, that our late much esteemed friend, Thomas Bates, Esq., is no more. His spirit returned to God who gave it, on the 26th July last, after an illness of six weeks. It may be said of him his country has met with a great loss; more particularly its agricultural community, as he was a practical agriculturist of a discriminating mind, and great experience. He more particularly excelled in the science of breeding,—especially in the breeding of Short-horn cattle. He, early in life, evinced a lively interest in this department, and by nature, he seemed highly qualified, not only to become conspicuous, but successful, in this branch of his profession, and the result of his 60 or 70 years of practical application, placed him in the front ranks of the most successful breeders England has ever produced. The wide spread reputation and standing of his Duchess herd of Short-horns, is well known and appreciated. The public will now have a full opportunity to judge of their merits, as they will be offered for sale at auction, probably next spring, or summer. The time of sale is not fixed, but as soon as it is, I will take the earliest opportunity of informing you. I intend offering part of my herd, and that of my brother's, at the same time; probably the number offered will amount to 150 head."

Having myself, sold many cattle to gentlemen in the United States and in Canada, possessing the blood of Mr. Bates' herd, I presume the intelligence contained in the extract of Mr. Bell's letter will be of much interest to them. Hence, allow me to ask the favor of its insertion in *The Cultivator*. Geo. Vail. *Troy, September* 15, 1849.

Answers to Correspondents.

Apples cultivated by the late Mr. Phinney.—Eds. Cultivator—You may inform your correspondent, "S. W.," in answer his inquiries about Mr. Phinney's Orchard, that the most valuable varieties of sweet apples that have yet come to bearing, are the following: Bough, (early ripening;) Plum water, (fall ripening;) Danvers, or Essex Green-Sweet, (winter ripening;) Andover Sweeting, (winter ripening.) Several other generally approved varieties of sweet apples have not yet come to bearing and therefore not determined. Nothing is placed around the trees to prevent injuries in plowing and harrowing the land. The work is done with oxen, and the strictest care enjoined upon the workmen. No injury has ever been done to the trees in cultivating the ground. F. Holbrook.

Poultry in Yards.—"A Subscriber," New-York. It is true, as has been often stated, that when large numbers of fowls are kept together in close confinement, they are often affected by diseases. Care should be taken that the yard and houses are exposed to a free circulation of air, and that they are kept as clean as possible. The different apartments should be whitewashed once or twice a year, and the manure should not be allowed to accumulate, as the gases which arise from it during fermentation are detrimental to the health of the fowls.

Eradication of Garlick—Eds. Cultivator—I observed an inquiry in the June number of *The Cultivator* for the best method of destroying the wild onion or Garlick. As this has not been answered by any of your correspondents, I will briefly state what I have done and the result.

I have adopted a rotation of summer cropping; say, one year corn, next potatoes, next oats, with clover seed, seeding pretty heavily, and plastering the clover. Let it lie one year—then repeat the same course. I had a field very full of the wild onion, which I treated as above mentioned, and at the end of my second course the plant had entirely disappeared, and I have seen none since, although this was done more than 20 years ago. Nathaniel Beckwith.

Domestic Economy, Recipes, &c.

Sewing Machine.—The editor of the Michigan Farmer witnessed the operation of a sewing machine, only a foot in length and breadth, but traversing a frame-work of several feet. A small crank moves it, which a child may turn. It contains a combination of "the wheel, lever, and spiral spring;" the eye of the needle is near its point; the thread is coiled with a cylindrical case; and the needle being once threaded, supplies itself till the skein is exhausted. A pair of pantaloons can be made by it (without buttons and button holes) in thirty minutes, and an overcoat in an hour and a half.

Patent Bread-Making Machine.—A machine for making bread is said to have been invented in Glasgow, Scotland, of which we find the following account in a foreign paper: It has for its object the accomplishment of the following among several other points of importance in the manufacture of bread or biscuits. 1. By the substitution of carbonated water for yeast, to render bread more nutritive. 2. A saving of 50 per cent. in the cost of fuel in heating the oven, by means of an improved method of substituting steam for fire. 3. The gradual admixture of the flour with the water without manual labor. 4. To insure the oven being kept of an equal heat by means of an indicator and regulator, and by means of which the heat can be kept exactly as may be desired. 5. An invention for placing the bread in and removing it from the oven. 6. By the use of an ingenious contrivance to regulate the desired weight of all bread, whether from an ounce to any number of pounds the baker may desire, without the possibility of error. 7. The saving of all manual labor in the manufacture of bread, with the exception of that of a few boys to place it upon, and receive it from the machine. 8. The avoiding of the necessity of the human hand touching or kneading the dough.

To Cook Cucumbers.—The Michigan Farmer recommends the following mode of converting cucumbers into "a delicate and delicious article of diet:"—Take cucumbers pretty well grown, and cut them into slices half an inch thick; put them into a vessel with a "fair proportion" (?) of sliced onions, with a lump [how large?] of butter, and stew them three quarters of an hour, adding salt and pepper, but using at no time any water.

Bed-rooms.—A correspondent of the Prairie Farmer, urging the importance of spacious bed-rooms, very justly recommends the rejection of such a room as a parlor, where plenty of room for both cannot be afforded. "The parlor is the best room in the house, and used only once in a week or two, while the bed-room is in use at least one-third of every twenty-four hours. A bed-room, for health and convenience, should be large, with a high story, and 16 by 16, or 16 by 18 feet, with no furniture but dressing table, toilet, wash-stand; with it should be connected a wardrobe, and bathing tub and shower-bath. These are daily comforts, and not kept for the use of others, as a parlor."

Notes for the Month.

Communications have been received since our last, from Wm. Jennison, Jas. R. Hammond, Darwin E. Gardner, S. Worden, W. L. Eaton, A Subscriber, Josiah W. Ware, M. W. Phillips, R. Watkins, Nathan Beckwith, John A. Porter, S. M. Norton, H. Watkins, W. R. S.

H. K. C., Cherokee Nation.—We cannot furnish "The Cultivator," for 1848, singly, the numbers for that year, together with the engravings, plates, &c. having been all lost by the fire which destroyed our office. We have succeeded in purchasing some vols. for that year, to complete sets of our work, so that we can furnish orders for *all* the back vols. All the vols., except the one for 1848, can be had singly.

The American Fruit Culturist, containing directions for the Propagation and Culture of Fruit Trees in the Nursery, Orchard and Garden, with descriptions of the principal American and Foreign varieties, cultivated in the United States. By John J. Thomas. Illustrated with three hundred accurate figures. Auburn: Derby, Miller & Co.

We have received a copy of this work from the publishers, Derby, Miller & Co., Auburn, who have got it out in good style. It makes a handsome duodecimo of over 400 pages, and is sold at $1.00. The readers of "The Cultivator," who are familiar with the writings of Mr. Thomas, on the subject of horticulture generally, will need no commendation from us, to induce them to procure it. We may, however, say that few men in our country have given more attention to the subject of Fruit in all its aspects, than Mr. Thomas. In the volume before us, we have the results of his experience and observation, continued with untiring perseverance for many years, in language at once concise and perspicuous; and we cannot doubt but that it will be deemed a valuable acquisition to the literature of this branch of rural improvement

The Christiana Melon.—We are indebted to Henry Vail, Esq., Mount Ida Farm, Troy, for some specimens of a very fine melon of this name. It is of about a medium size, as compared with the nutmeg and citron varieties, rather egg-shaped; skin thin, of a pale-green color; flesh thick, of a deep orange yellow, sweet, melting, and high flavored. It is decidedly the best yellow-fleshed melon we have ever seen, and scarcely inferior to the best of any kind. It is early, coming to perfection, as Mr. Vail informs us, two weeks before any other good variety.

Scientific School.—We have received a prospectus of an institution entitled "Scientific School of Useful Knowledge," located at Darien Centre, Genesee county, N. Y. The Institution embraces a male and female department, each distinct and separate from the other. The department for boys has three divisions, called the Classical, Commercial and Agricultural. In the first, young men are fitted for college; in the second they are taught the principles of trade, book keeping, &c.; in the third, agricultural chemistry, natural history, &c. The course of studies for females is appropriate and designed to embrace the term of three years. The Institution is under the charge of Rev. D. M. Smith, whose testimonials for so important a trust are numerous, and from high sources.

The Homer Car.—We have mentioned in another place that there were twenty yoke of working oxen exhibited at the State Fair, from Homer, Cortland county. These oxen came on in one team, attached to a large car, of octagonal form, ornamented with wreaths of evergreens and flowers, and containing handsome specimens of fruits, vegetables, grains, &c., the produce of the town from which it came. It was surmounted by a flag, and made an imposing appearance as the noble team drew it to the field.

Corn for Seed.—Corn for seed ought to be gathered in September. It should be *selected* in the field, as a much better opportunity is here afforded for obtaining the best, than if it is taken from the heap after it is husked. In the field we can see all parts of the plant and can judge whether it possesses the characters we desire to propagate. The most perfect ears should be chosen. They should be sufficiently early, and should be taken from stalks of moderate size—the ears rather low on the stalk. The ears designed for seed can be secured as soon as the grain is fairly glazed, by cutting the whole stalk, near the ground, and hanging it in some airy room or shed. The grain will be supported by the sap of the stalk and will fill as well as if it had remained in the field.

Reaping Machines.—The Prairie Farmer says—"McCormick's Reaper has been now sold in the west for three seasons extensively, and somewhat before that. The sales amount, say, to the following figures: For the year 1847, to 500; the year 1848, to 800; and 1849, to 1500; total, 2800. Of Easterly's Harvester, the whole number in use this harvest may reach 180. Other kinds, say 100. These all do the work of nearly 17,000 men."

Reject

Hilling Potatoes—the Rot.—Our potatoes are very free from the rot. It has been thought that the exemption is owing to the manner of hilling them,—so that the rain is turned off as much as possible, and the tubers not allowed to soak in wet weather. We formerly made the hills like a basin to catch the rain; but now they are made in the shape of a cone. There may be something in it; for the ground was well manured, which I believe has generally proved unfavorable. [Extract from a correspondent.]

Long-Wooled Sheep.—N. S. Townshend, in a communication to the *Ohio Cultivator*, states that the Leicester sheep do *not* consume a proportionate amount of food in proportion to their bulk—that being hardier and healthier, their flocks may be increased much faster—that besides the excellent quality of the mutton, he has weighed single animals of 300 pounds—and that a whole flock will average 6 lbs. of wool a piece, the rams often shearing 10 or 12 lbs., and that the wool sold this year at Elyria for 23 cents per pound.

Peat Charcoal.—The value of peat charcoal is attracting much attention in England, not only as a manure or fertilizer of itself, but also as a deodoriser or disinfectant. Mr. J. W. Rogers, of Dublin, has for some time been engaged with experiments of this substance. When he first brought the matter before the public, in 1845, it was alleged that charcoal could not impart carbon to the roots of plants, as the leaf was supposed to be the only medium by which plants could absorb such food. He states that he has often tried the experiment, and that the result has invariably been that both the root and leaf took the carbon. He concludes, from his experiments, that peat charcoal possesses some valuable properties which wood charcoal does not, particularly as a deodoriser. Its absorbent power is very great. Mr. Rogers states that it will take up and retain from 80 to 90 per cent. of water, and from 90 to 100 volumes of noxious gases arising from animal excrement and other putrescent matter.

Osage Orange.—The editor of the *Valley Farmer* thinks that this plant has not been sufficiently tried to justify the judicious farmer in the extensive cultivation of it. He thinks those farmers who are unwilling to prune their fruit trees, will be likely to neglect their hedges; and that the Osage orange, without pruning every year, will become overgrown and occupy too much space; will die out in places and leave gaps. This may be true; but where materials for fencing are scarce, we think farmers, who understand the management of hedges, and will give them proper attention, will do well to make a trial—at first on a small scale—with the Osage orange.

Fine Fruits.—We have received of J. W. **Ford**, Esq., of this city, by the politeness of Hon. Mr. **Bush**, fine specimens of the Brown Beurre, and White Doyenne or Virgalieu pears. Also, from Mr. **McIntosh**, of this city, Brown Beurre and Gansell's Bergamot pears of large size and fine quality. The latter gentleman, and Mr. **Joseph Cary**, of this city, have favored us with excellent specimens of the Royal Muscadine, White Sweet Water, Black Cluster, and Isabella grapes, well ripened in the open air.

☞ We tender our thanks to Mr. E. E. **Platt**, for a liberal donation of fine plums from his garden on Arbor Hill.

Causes of Decay in Timber.—In *The Gardeners' Chronicle* of June 30th, 1849, is an able and valuable article, under the editorial head on this subject. It was probably written by Professor **Lindley**, the well-known editor of that journal. In the *American Agriculturist* for September last, we find the principal part of the same article, inserted as original, under the signature of "B."

"Escutcheons" of Cows.—J. N. **Pierce** asks the editor of the *Ohio Cultivator* what he thinks of Guenon's Treatise on Milch Cows; and adds, that the observations he has made since reading the work. do not agree with the rules there laid down.

Subsoil Plowing.—Ex-Governor **Hill** states in the *Visitor*, that he has found great benefit from subsoil plowing on the "driest plains" near Concord, N. H. He states that in a field of potatoes on these plains, the past season, he found the length of the potatoe-vines a "sure index of the depth of the plowing." Wherever the ground was cheated of the subsoil plow, upon a balk, or in the field, the vines were as much shorter, as the soil was stirred a less depth." He gives the result of an experiment in subsoiling made several years since. The ground was plowed with a surface plow, eight inches deep, and a subsoil plow run in each furrow eight inches deep. He left two strips, a rod wide, not subsoiled. He had taken six crops from the field—three of grass, one of oats, one of corn—and the inferiority of each crop on the portions not subsoiled was apparent, and could be seen at the distance of forty to fifty rods. The subsoiled part gave from two to three tons of hay to the acre.

Sowing Grass Seed in Autumn.—The American Farmer recommends for the late sowing of timothy seed, that a peck of *buckwheat* per acre be sown at the same time. The frost will cut the buckwheat down, where it will remain to protect the young plants through winter.

Salt for Asparagus.—The editor of the New England Farmer says that asparagus will bear one hundred and sixty bushels of salt per acre, and be greatly benefitted by the application—and that cabbages and turneps are much benefited by salt.

Farm School.

THE *Mount Airy Agricultural Institute* will commence its winter session on the first Thursday of October next.

The course of instruction pursued is such as to insure to the student a thorough knowledge of the *Natural Sciences*; collateral with a full practical course on the farm, in all the labor of which the students participate.

For further particulars address the Principal.

JOHN WILKINSON,
Sept. 1, 1849.—2t. *Germantown, Pa.*

Prices of Agricultural Products.

New-York, Sept. 20, 1849.

FLOUR—Genesee, per bbl., $5.25a$5.37½—Common State and old mixed western, $4.75a$4 87½

GRAIN—Wheat, Genesee, per bush., $1.17—Southern Red, $1.03a$1.08—Corn, Northern and Jersey, 59½a61.—Rye, 58c.—Barley, 67c.—Oats. new, 36a38c., old, 39a40.

BUTTER—best, per lb., wholesale, 18a20c.—western dairy, 14a16c.

CHEESE—per lb., 5a7c.

BEEF—Mess, per bbl., $12.50a$12.75.

PORK—Mess, per bbl., $10a$10.12—Prime, $8.50a$8.62½.

LARD—per lb., in kegs, 6½a6¾c.

HAMS—Smoked, per lb., 8a11½c.

HOPS—per lb., first sort, new, 15c.

COTTON—Upland and Florida, per lb., 9a11½c.—New Orleans and Alabama, 9a11½c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	35a37c
" half blood do.,	30a32c.
" one-fourth blood and common,	27a29c.

Remarks.—Breadstuffs are in fair demand for the local trade and for the east. In provisions the trade is without much change. The latest arrivals from England, represent the harvest as excellent, and the weather very favorable for securing it.

South Down Sheep

FOR SALE. Ten full blooded South Down Rams, from Lambs to four years old. Also 20 Ewes, from yearlings to four years old.

The subscriber has spared no expense and care to raise the flock to a high standard, and he, therefore, offers them for sale with confidence in their merits.

Application may be made, either personally or by letter, addressed,

JOHN McD. McINTYRE.
Oct. 1—2t. Albany. N. Y

Highland Nurseries, Newburgh, N. Y.

Late A. J. Downing & Co.

THE Proprietors beg leave to inform their patrons, and the public in general, that their stock of

Fruit & Ornamental Trees, Shrubs, Roses, &c.,

For autumn planting, is unusually large and thrifty, and embraces all of the best varieties introduced into notice in this country or Europe. of Apple, Pear, Plum. Cherry. Peach, Nectarine, Apricot. Grape Vines, Gooseberry, Currants, Raspberry, Strawberry. &c.

Portugal Quince trees. standards, extra size, each, $1.00
" " quenouille, " " 1.00
Angers. (*true*) extra, " 1.00
Trees of the usual size. 50 cents.

The stock of Ornamental Trees, Shrubs, &c. is very large, and quantities to dealers, or planters on a large scale, will be furnished at greatly reduced rates.

Hedge Plants.

A large lot of Buckthorn and Osage Orange plants.

Also, a large lot of Rhubarb and Asparagus roots.

The entire stock has been propagated under the personal supervision of A. SAUL, whose long connection with this establishment is some guarantee, from the reputation it has gained, *and the present proprietors are determined to merit*, as to the *genuineness* and accuracy of the present stock.

Orders respectfully solicited, and will receive prompt attention, which will be carefully packed and shipped to any part of the Union. or Europe.

Catalogues furnished *gratis* to *post paid* applicants.

Newburgh, Oct. 1—2t. A SAUL & CO.

Prince's Linnæan Botanic Garden & Nurseries,

Flushing, N. Y.

WM R. PRINCE & CO., successors of Wm. Prince, and sole proprietors of his great collection, offer the largest and choicest assortment of

Fruit and Ornamental Trees and Plants,

To be found in America; and will transmit *Descriptive Catalogues* to all post paid applicants. desirous to purchase.

The choicest varieties of fruit which are scarce elsewhere. are here extensively cultivated and applicants will not be disappointed. Every desirable fruit enumerated by Downing, Manning, Kenrick and Hovey. and in the catalogues of Europe, can be supplied. Of the finest varieties of Pears. 50.000 trees can be supplied, of which 15,000 are of bearing age on both the pear and the Quince. Purchasers are solicited to visit the establishment, and judge for themselves; but the same attention will be paid to the selection for all distant correspondents. The prices are as low. and mostly lower than trees of equal quality can be elsewhere obtained. And above 500 varieties of Fruit Trees. and a much larger number of Ornamental Trees can be supplied, that cannot be obtained elsewhere in the Union, except in a few casual instances.

Every premium for Roses and Strawberries. was awarded to us by the Long Island Horticultural Society.

A Wholesale Catalogue will be sent to all venders.

The transportation expense to the West is now moderate, and the Agents' Receipt will be sent to each purchaser, which will prevent the possibility of loss. Cash or a reference can be sent with the order, by those who are strangers to us.

Oct. 1—1t.

Private Boarding School,

Reading Ridge, Fairfield County, Ct.

THE next session of this Institution opens on the first Wednesday in November next. Course of instruction embraces all the English branches, together with Latin, Greek, French and Music. There is an excellent farm connected with the school, and students will be instructed in Agriculture if desired.

The terms are $80 per session of five months, including board, tuition, washing, &c, &c.

Circulars may be had of Charles Ames, 104 Broadway, New-York, or by addressing the principals.

DANIEL SANFORD, Jr., } Principals
A. M. SANFORD, }
Oct. 1—1t.

Employment Wanted.

ANY one who wishes to pay a good price for an active and industrious hand to manage a farm, one who has studied the principles and practice of modern farming, who can construct and repair buildings and implements, who is 27 years old and has a small family, address, *post paid*, CHARLES BETTS,
Burr Oak, St. Joseph Co., Mich.
Good references given and required. Oct. 1.—1t.*

Macedon Nursery.

THOMAS WRIGHT, successor to Wm. R. Smith, (whose ill health compels him to relinquish the business,) has purchased the entire stock of this well known establishment, for which he has hitherto acted as agent. The design of the original proprietor, "to furnish the community with the best varieties of Fruits," will be constantly kept in view.

The stock of Trees is now large, and will be sold at the Nursery at the following reduced prices, viz:—

6,000 Apples, $16 per hundred, $18 when delivered.
1,000 Pears, $35 per hundred.
3,000 Cherries, $25 per hundred
3,000 Peaches, rare kinds, $10 to $12 per hundred

Apple, Pear, Wild Plum, Quince, &c., by the thousand.

Apricots, Nectarines, Plums, Filberts, Quinces, Chestnuts, Walnuts, Strawberries, Grapes, &c., &c., at very moderate rates. A great variety of Ornamental Trees, and Roses, and other Plants are offered at 50 per cent discount from the usual prices. Immediate attention will be given to all orders accompanied by cash or satisfactory reference.

Macedon, Wayne Co., Oct. 1—1t.

Patent Railroad Horse Powers and Overshot Threshing Machines and Separators.

NOTWITHSTANDING the increased facilities for manufacturing the above celebrated machines, which our extensive manufactory recently erected in this city affords, the demand has exceeded the supply.—Upwards of three hundred sets have been sold since the first of June, and to almost all portions of the Western states, as well as our own.

In all and every case, they have given universal satisfaction—and with their long established character for durability and cheapness of cost and efficiency, their utility is no longer questioned. More than one hundred sets have been sold this season in the states of Illinois, Wisconsin and Ohio—several in Indiana and Canada, and but one opinion prevails where they are used. With our liberal terms, as advertised by catalogues and other ways, the purchaser ventures nothing in trying or purchasing them.

Below we give the opinion of Mr. J. A. Wight, editor of the Prairie Farmer, at Chicago, Illinois, than whom a more capable, careful, or independent man in such matters, is not to be found. He was authorised by me to receive orders for the above machines and has succeeded thus far, in forwarding more orders than could be supplied.

The same Mr. Wight was appointed chairman of the committee No. 1 on Agricultural Implements, at the Fair of the State Ag. Society at Syracuse, but was detained at home, and forwarded the following opinion in writing, for the use of the committee.

"I have sold about thirty sets of the Railroad Horse Powers and Threshing Machines this season, and a majority of them have gone into use.

"Thus far they are greatly preferred for the following reasons:

"Ease of operation, direct application of the power to the thresher without gearing; safety, ease of keeping in order, ease and cleanliness of feeding—and for the general perfection with which they do their work

"Threshing can be done with one-half or two-thirds what it costs with the large six and eight horse power machines.

"They have given entire satisfaction so far as they have been used here." HORACE L. EMERY.

Mediterranean Wheat.

200 BUSHELS of this variety of Wheat for sale, being a portion of an excellent crop of Winter Wheat, raised for the fifth year on the same farm in Greene county, N. Y.

It is two weeks earlier than the Hutchinson wheat and is always harvested before the Rye crop is ready for the sickle. This season it has done better than heretofore, notwithstanding it has improved in quality and yield.

The grain is large, of light color, and weighs, (this crop through) 64 pounds per bushel. It has never been affected by the Weevil, (or wheat midge,) Fly or Rust. This season, the yield was 23 bushels to each bushel sown

For sale at the Albany Agricultural Warehouse & Seed Store,
Nos. 369 and 371 Broadway, Albany, N. Y.
Sept. 1—2t. By HORACE L. EMERY.

Dorking Fowls.

SUPERIOR Dorking Fowls will be furnished caged, and put on board ship, with food for their voyage, at $5 per pair, by
N. S. PRENTISS,
Astoria, New-York.
Oct. 1—1t.

GEORGE W. MERCHANT'S CELEBRATED

Gargling Oil for Horses.

UNPARALLELLED IN THE HISTORY OF MEDICINE AS THE

Most Remarkable External Application Ever Discovered!

TRUE ECONOMY. The unparalleled success of Merchant's Gargling Oil, in the cure of diseases in Horses and Cattle, and even in human flesh, is daily becoming more known to the farming community. It can hardly be credited, except by those who have been in the habit of keeping it in their stables, what a vast amount of pain, suffering, and time, are saved by the timely application of this Oil. There is nothing equal to it in the shape of a remedy for such diseases as

Spavin, Sweeny, Ringbone, Windgalls, Poll Evil, Callous, Cracked Heels, Gall, of all kinds, Fresh Wounds, Sprains, Bruises, Fistula, Stitfast, Strains, Lameness, Sand Cracks, Foundered Feet, Scratches or Grease, Mange, Rheumatism, Bites of Animals, External Poisons, Painful Nervous Affections, Frost Bites, Boils, Corns, Contractions of the Muscles, Whitlows, Chilblains, Chapped Hands, Cramps, Burns and Scalds, Swellings, Contraction of the Muscles, Weakness of the Joints, Caked Breasts, &c, &c, &c., &c.

From the peculiar nature of this Oil, and the unparalleled success it has met with in the hands of the

FARRIER, FARMER, AND STAGE PROPRIETOR,

it is but justice to say, that of the great number of medicines that have been offered, none have been so well adapted to the prompt cure of diseases to which horses are liable; it has been very justly called a complete PANACEA FOR THE HORSE. For instance read the following:

TO OWNERS OF HORSES.

This may certify that I have had for many years the care of from

100 to 200 Horses,

and have made use of Merchant's Gargling Oil for two years past, and can safely say, that for all the diseases that horses are liable to, I never saw its equal. I use about one bottle per month, and recommend it to the public, as the best medicine for horses now in use. E. D. MINOR.

FOR SALE by A. McClure & Co., Burrows & Nellegar, and George Dexter, Albany; W. S. Wood Cohoes; D. C. Constable, Schenectady; Dr. C Heimstreet, J. F Prescott, P. D. Orvis & Co., and Wm. Briggs, Troy; Wm. Tucker, West Troy; Heber Walsh and C. S. Casy, Lansingburgh. Also, by respectable dealers generally in the United States and Canadas.

CAUTION TO PURCHASERS.—Beware of Counterfeits, and be sure the name of the sole proprietor, GEORGE W. MERCHANT, Lockport, N. Y., is blown on the side of the bottle, and in his hand writing over the cork.

All orders addressed to the proprietor will be promptly responded to. ☞ Get a pamphlet of the Agent, and see what wonders are accomplished by the use of this medicine.

HORSES.—We would call the attention of that portion of our readers who are in any way interested in horses, to the advertisement in another column, descriptive of the celebrated medicine called "Merchant's Gargling Oil." From the peculiar nature of the article, and the unparalled success it has met with in the hands of those who have the care of horses, it is but justice to say, that of the great number of medicines which have been offered, none have been so well adapted to the prompt cure of most diseases to which horses are liable.—*Detroit Express.*

Oct. 1—1t.

JUST PUBLISHED,

BY DERBY, MILLER & CO., AUBURN,

THE AMERICAN FRUIT CULTURIST,

BY J. J. THOMAS.

A GREATLY enlarged and improved edition of the Fruit Culturist, containing more than triple the matter of the former editions, having been wholly re-written, so as to embrace essentially

ALL THE VALUABLE INFORMATION

Known at the present time, relative to

FRUITS AND FRUIT CULTURE.

It will contain

THREE HUNDRED ACCURATE ENGRAVINGS,

And will include condensed and full descriptions of all fruits of merit or celebrity cultivated or known in the country.

To prevent confusion in a numerous list of varieties, careful attention has for years been given to effect the clear and systematic arrangement adopted in this work; and further to enable the reader to know at a glance, the various grades of excellence, the quality is designated by the size of the type used for the name.

The numerous figures of fruits are

EXACT IMPRESSIONS

Of average specimens. The descriptions have been prepared in nearly every case, from the fruits themselves; and to distinguish fixed from accidental characters, careful comparison has been extensively made with specimens from several different states, and with the descriptions in the best American works on Fruits.

To determine the qualities as adapted to different regions, assistance has been largely furnished by a number of the most eminent pomologists of the Union.

The whole making a handsome duodecimo volume, of over 400 pages, at the low price of One Dollar.

DERBY, MILLER & CO.

Auburn, Sept. 1, 1849.—1t.

Wheelers's Patent Railroad Horse Powers and Threshing Machines.

THE subscribers having been appointed agents for selling the above celebrated machines for the city and vicinity of New-York, in place of A. B. Allen & Co., (who have heretofore had the sale of the same,) they solicit the attention of those wishing to purchase.

☞ The farmers of Long Island can be supplied with a machine equally well adapted for their use, and which is afforded at the same prices, without any extra charge for premiums or Patent rights. All are warranted to give satisfaction, or are subject to be returned and the full purchase money refunded. A supply constantly on hand at their Warehouses, Nos. 187 Water Street and 195 Front St., New-York. JOHN MAYHER & CO.

Sept 1.—tf.

Nursery of J. J. Thomas,

Macedon, Wayne Co., N. Y.

THIS nursery now contains many thousand fine trees, of large, handsome and thrifty growth, consisting of Apples, Pears, Cherries, Peaches, Apricots, &c., and the smaller fruits, of the best standard sorts, and most of the finest new varieties; ☞ *in all cases they have been propagated for sale after being thoroughly proved in bearing.* ☜

The collection of APPLES, consisting of many thousand large trees, mostly 7 to 9 feet high, embraces the finest standard varieties, and nearly all the valuable new sorts.

Very fine pear seedlings, at $12 per 1000, two year old apple seedlings, at $5 per 1000, Horse chestnuts 1 to 2 ft high, at $5 per 100, &c., &c.

When purchasers desire, selections of the best for affording a regular succession of fruit throughout the season, will be made by the proprietor.

A carefully assorted collection of hardy ornamental trees, shrubs, and herbaceous perennial plants, will be furnished at very moderate prices.

Trees for canal and railroad conveyance, will be well packed in bundles, enclosed in strong mats, with the roots mudded and encased in wet moss, so as perfectly to preclude all danger of injury.

All communications, post-paid, to be directed Macedon, Wayne Co., N. Y. Sept. 1.—2t.

Selling Off.

LINNÆAN BOTANIC GARDEN & NURSERY, late of WM. PRINCE, deceased, *Flushing, L I, near New York.* WINTER & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving Partner, the entire stock of this establishment, comprising every description including the newest and choicest varieties of

FRUIT AND ORNAMENTAL TREES,

Shrubs, vines, Plants, Roses, &c., will be disposed of at very reduced prices, in order to close the business as speedily as possible.

Orders accompanied with the cash, to the amount of $10, or upwards, will be supplied at a reduction of 25 per cent. from the usual prices.

Nurserymen, Venders, and others, wishing to purchase by wholesale, will be supplied at such reduced prices according to kind and quantity, as will probably prove satisfactory to them.

Descriptive Catalogues gratis on application, post paid.

Sept. 1, 1849.—2t.

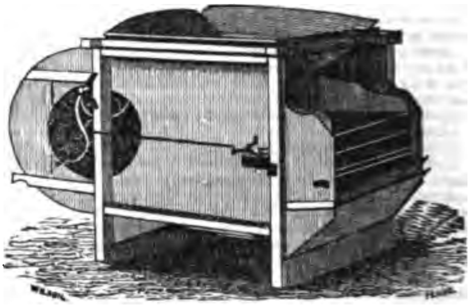
Books for Rural Libraries.

THE following works are for sale at the office of THE CULTIVATOR, No. 407 Broadway, Albany:

American Agriculture, by R. L. Allen, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole, 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $4.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents.
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruit Culturist, by J. J. Thomas, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
Farmers' Companion, by Judge Buel, 75 cents.
Lanscape Gardening, by A. J. Downing, $3.50.

I. T. Grant & Co.'s

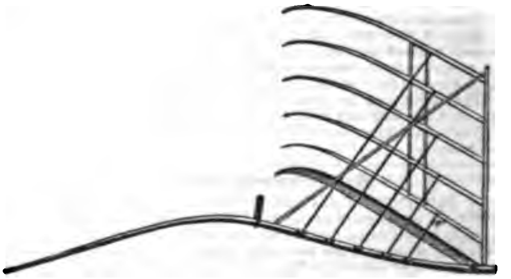
PATENT FAN MILLS AND CRADLES.



WE continue to manufacture these celebrated Mills and Cradles. They have been awarded six first premiums at the New York State Fairs, and at the great American Institute in New York, and several County Fairs, always taking the first premium over all other mills. The manufacturers feel confident, therefore, in offering these mills to the public, that they are the best in use. During the year 1847 they were introduced into England, by Mr Slocum, of Syracuse. They were very favorably noticed by the English papers; and from a communication of Mr. S.'s, published in the Transactions of the N. Y. State Ag. Society, for 1847, it will be seen that they were tried by several large farmers, and highly approved. One farmer, it is stated, set aside an almost new winnowing machine, for which he paid £18, ($90) and used Grant's for cleaning a crop of 300 qrs. (2,700 bushels) of wheat, and several hundred bushels of mustard seed. We have lately made some valuable improvements in the article, though the price remains the same as before.

Our fans are extensively used and highly approved at the south, for cleaning rice. We are permitted to make the following extracts from letters received from Hon. J. R. Poinsett, of South Carolina:—"The fan you sent last summer, [1848] has been successfully used to clean dirty rice, and winnow that from the threshing floor. It answers every purpose." In relation to another of our fans, he writes, (April 23, '49.)—"Both this and the first mill you sent, work very well; and the last, which is the largest that can be well worked by a man, cleans the dirty rice perfectly, and is altogether the best wind-fan I ever used for that purpose."

Our Cradles have taken the first premiums at two New York State Fairs, and are considered the best in use.



The great encouragement we have received from dealers and agriculturists, has induced us to greatly enlarge our business, and we hope by strict attention, to merit a further patronage.

Orders will be thankfully received, and receive prompt attention.

I. T. GRANT & CO.
Junction P. O., Rens. Co., 8 miles north of Troy

May 1, 1849.—5t. eom.

To Nurserymen, Orchardists and Gardeners.

THE subscriber offers for sale at his nurseries, at Plymouth' Mass., Pear, Quince, Cherry, Plum, Apple, Paradise and Mahaleb stocks, suitable for grafting in the Spring, and for budding the coming season. Mountain Ash, Elm, Spanish Chestnut. Ash, Maple, Lime, Alder, Larch, Scotch fir, Silver fir, Norway fir, Arbor Vitæ, Balsam fir. from 1 to 4 feet; Cedar of Lebanon, Araucaria imbricata, Deodar cedar, Oaks, Althæas, Hawthorns, Lilacs, Spiræas, Syringas, Deutzias, Acacias, Roses, Honeysuckles, Climbers &c. Raspberries, May's Victoria and other currants, Gooseberries, Native grapes, Foreign grapes in lots for vineries. Myatt's Victoria, Early Scarlet. and other rhubarbs. The best native and foreign *Pears*, 1 to 5 years from the bud, fine thrifty trees and well grown. 40 Select named Verbenas. all of Beck's Pelargoniums, in 23 varieties, including those of last season, being the finest Pelargoniums ever introduced.

Priced Catalogues sent on application.

Sept. 1, 1849.—3t. **B. M. WATSON.**

Fruit Trees.

THE subscribers offer for sale this fall their usual assortment, viz: Apples, Plums, Pears, Cherries, Peaches, and Ornamental Trees.

The following Pears on the QUINCE.

Louise Bonne de Jersey,
Bartlett,
Virgalieu, (White and Gray,)
Onondaga, or Swan's Orange,
Duchesse d' Angouleme,
New Gray Winter Beurre,
Doyenne d' Ete, or Summer Virgalieu,
Columbia,
Bloodgood,
Vicar of Winkfield,
Beurre Diel,
Dearborn's Seedling,
Leon Le Clerc.

Also, a few hundreds of the European Mountain Ash, of an extra size. **WILSON, THORBURN & TELLER,**

Albany. Sept. 1.—3t. Nurserymen.

Syracuse Nurseries.

Thorp, Smith & Hanchett, Proprietors, Syracuse, N. Y.

FIFTY acres of the fertile soil of Onondaga Co. are occupied by the proprietors of these nurseries in the cultivation of *fruit trees* alone, embracing almost every desirable variety of Apple, Pears, Peach, Plum, Cherry, Apricot and Nectarine. Trees sent from their nurseries are universally admired for their vigorous, healthy, and *youthful* growth,—the best guarantee to the purchaser of a rapid advance to largeness of size, and beauty of form,—and it is the aim of the proprietors to be able to supply those who may favor them with their orders with a quality of trees always superior.

Among their varieties of the apple, they have many thousands of the justly celebrated NORTHERN SPY, *from seven to nine feet in height*, which they will continue to supply, as heretofore, in an assortment with others, at the *same rate*. Where the selection is left to them, a portion of the Northern Spy is always included. They cultivate largely, also, the *Hawley*, the *Green Sweeting*. the *Ladies' Sweeting*, *Peck's Pleasant*, *Swaar*, *Baldwin*, *Spitzenburg*, in short, all of the best standard varieties, early and late. Among forty of the choicest kinds of pears, they have large sized and well formed trees of the *Onondaga*, *Oswego Beurre*, and *Van Mon's Leon Le Clerc*. Of cherries, peaches, plums, &c., their nurseries include, in large numbers, all that are most desirable. Purposely limiting their varieties of fruit trees to those only that are of approved worth, their Catalogue will be found to contain scarcely one that ranks below "*first rate*" Persons desiring to buy at *wholesale*, can be supplied on the most liberal terms, and can depend upon obtaining selections of the best varieties, as well as trees of the finest growth.

The proprietors have been much gratified by the constantly increasing demand for their trees, from the Eastern part of this state, and from New England; and in soliciting a continuance of favors from those quarters, they pledge themselves that the productions of their nurseries shall not forfeit the partiality which is so flatteringly bestowed upon them.

Much care is given to the packing of trees, so that they can be transported with safety to any distance.

Catalogues may be obtained at the apothecary store of M. W. Hanchett, between the Railroad and Syracuse House; and by *post-paid* application to the proprietors.

August 1.—3t.

John Mayher & Co.

United States Agricultural Warehouse. 195 Front, one door south of Fulton Street, New-York City,

WHERE they have for sale over 200 different patterns and sizes of Plows, of the most approved kinds. and suitable for all kinds of soil, together with the most extensive assortment of Agricultural Implements ever offered for sale in the city of New York, which will be sold at lower prices than they can be obtained at any other establishment Purchasers will do well to call and examine their stock before purchasing elsewhere. Among the plows advertised will be found J. Mayher & Co's celebrated and unequalled First Premium Eagle D Plow, without doubt the best and cheapest plow to be had in the United States.

N. B. Castings of all kinds made to order.

New-York, Sept 1, 1849.—tf.

Hamilton Nursery.

THE proprietor of this establishment confines himself wholly to the propagation of hardy Fruit Trees, all of which have been obtained from the most reliable sources, or cut from bearing trees of well known varieties. About sixty varieties of plums and a large quantity of the Apples have been proved on his own grounds, and all are cultivated with his own hands, assisted by his son, who is soon to assume a personal interest in the business. And all the cutting of buds or grafts, and the labeling of trees, with the oversight of taking up and packing, being done by him in person, he feels confident of being able to give as good satisfaction as to correctness, as can be given at any other nursery. The stock of apples is large, and embraces numerous varieties, so that the Fruit Grower and Amateur Horticulturist can each be supplied.

A liberal discount to nurserymen and dealers in trees.

Seedling stocks of Apples and Plums for sale.

AGENTS.—Geo. G. Sheppard, 145 Maiden Lane, New-York; H. L. Stephens, Honesdale Pa., Wm. J. Hamilton, Ringwood, McHenry Co., Ill

Catalogues sent gratis to all *post paid* applicants

Canterbury, Orange Co, N. Y. **CHARLES HAMILTON.**

Sept. 1.—2t.

White Dorkings.

THE subscriber has on hand, a few choice White Dorking fowls which he will sell at fair prices—bred by himself. As far as his knowledge goes, this variety of the Dorkings is more sought after, both in England and in this country, on account of their color. **L. DURAND.**

Derby, Ct., Sept. 1, 1849.—2t.*

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FOR sale by the subscriber, a full blood Hereford Bull, from the herd of Messrs. Corning & Sotham, Albany, N. Y. Said bull is six years old, and for symmetry of form, size, and the thrift and excellence of his stock, is probably unsurpassed by any bull in the State. **J. P. FAIRBANKS.**

St. Johnsbury, Vt, Aug. 1.—3t.

Chemical Manure

Manufactured by "the George Bommer New-York Manure Co."

THIS manure is made chiefly of Fecal Matter from the sinks, in which is mixed a small portion of substances that are of themselves, powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly and in proportion to the requirements of the plants, and therefore produce its effects for a time equal to that of farm manure.

This process was at length discovered by the French Chemists, and is now carried out with complete success in more than sixty of the large cities of France, where such manure factories are in full operation.

The "G. B. N. Y. M. C." has established a Factory on an extensive scale near the city of New York, in which they manufacture this kind of manure. and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities. this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal. troublesome and laborious.

The manufacturing department is under the special charge of GEORGE BOMMER, Esq., who has a perfect scientific and practical knowledge of manure matters generally; and the company has established a standard for the strength of its manure, from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it.

Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels, or 36 to 45 bushels spread broadcast. Applied in hills, half of the quantity will suffice. Its application is simple and easy, and printed instructions for its use will accompany each parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another known under the name of "poudrette," although the principal component of ours (the fecal matter) is the same as that which is used in the poudrette, in a much less proportion; our auxiliary substances, as well as our manufacturing processes are altogether of a different nature and kind.

It belongs not to us to eulogise further. the quality of our manure; what we desire at present is, to call upon the members of the agricultural community, to try it! and we have reason to assure them, that they will find it the most profitable manure they have ever used.

PRICES, TAKEN AT THE FACTORY:

37½ cents per bushel, without package;
50 cents per bushel, packed in Barrels, or
$1.50 per Barrel, package included.

Orders addressed to the above Company, at their office, 72 Greenwich St., New-York, will be promptly attended to.

By order of the Board of Trustees,

New-York, Jan., 1849.—tf **GEO. BOMMER, Director.**

☞ The factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards.

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School of Applied Chemistry,

Yale College, New Haven, Ct.

B. Silliman, Jr., Professor of Chemistry applied to the Arts.
J. P. Norton, Professor of Agricultural Chemistry.

THE Laboratory in this department is open during nine months in the year for instruction in the analysis of soils, minerals, ores, &c.

During the summer and autumn terms, there will be lectures on Mineralogy, Geology, Natural Philosophy, Elementary Chemistry, and other useful branches of Natural History.

The annual course of lectures on Agricultural Chemistry, by Prof. Norton, will commence soon after the middle of January, and continue till about the first of April, at the rate of four or five lectures in each week.

These lectures are intended to be delivered in a form quite intelligible to those who never turned their attention to chemical studies. The great principles of Improved Agriculture will be illustrated and explained during the progress of this course in such a manner as to be understood by all. Tickets for the course $10.

Students in the laboratory have glass, chemicals, balances, and other apparatus furnished, and pay $20 per month. Analyses of minerals, soils, &c., made on reasonable terms.

For further particulars apply to either of the Professors.

New-Haven, Ct., Sept. 1, 1849.—5t.

Improved Stock.

DURHAM, Hereford, and Devon Cattle; Saxon, Merino, Cotswold, Leicester and South Down Sheep. Lincolnshire, Suffolk, and Chinese Pigs. All these superior breeds can be had of the subscriber, of the best quality, and shipped to any port of the country. Autumn is the best time to execute such orders.

SAMUEL ALLEN,
Oct. 1—1t. 189 Water St., New-York.

Fruit Trees.

THE subscriber offers for sale this fall, among a general assortment of fruit trees, the following quantity; and a large number of the other leading kinds, which will be sold on reasonable terms, especially by the quantity:

APPLES.

5,000 Rhode Island Greening,
3,000 Newtown Pippin,
2.000 Dominie,
2,000 Belle Fleur.

CHERRIES.

2,000 Napoleon Bigarreau,
1,000 Black Tartarian,
1.000 Yellow Spanish,
1,000 Holland Bigarreau,

30,000 Early Golden Apricot, both on the peach and plum
2,000 Frost Gage plum trees.
2,000 of the same 2½ feet high, $10 per 100.
3.000 Isabella Grape Vines, from 2 to 4 years old.
5,000 strong one year-old vines, for $9 per 100.
500 Large Linden trees.
A large quantity of Fir and Spruce bushes.

Amateurs are invited to call and see the show of fruit on the Frost Gage trees this fall.

CHARLES DUBOIS,
Oct. 1—2t. Fishkill Landing, N. Y.

Allen's Improved Portable Railroad Horse Power and Overshot Thresher and Separator.

THE superiority of this power consists in the facility of driving a machine in either direction, without crossing the belt, simply by the use of an additional pinion. There is less friction in this power than in any other of similar construction, it consequently works easier and will last longer. The materials are all of the best kind, and put together on the best principles, and in the most workmanlike manner. Powers have been made for the last ten years on nearly the same principle as the above, and have given general satisfaction. Every power is warranted to work well.

Threshers, both over and undershot, separators and fixtures, and wood-sawing machines, can be had to accompany the power.

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Plows.

UPWARDS of five hundred Plows of the most approved patterns both for the south and the north.

STRAW CUTTERS.

THE Spiral Blade and Cylindrical Straw and Hay Cutters, of various sizes, either for hand or horse power.

FITZGERALD'S PATENT FLOUR AND GRAIN MILLS.

BEING appointed sole agents in this city, for the above excellent and economical mills, the subscribers offer them for sale at the manufacturer's prices. Also, cast iron and other mills.

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HAND and horse-power corn-shellers of the various kinds, made in a superior manner.

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GRANT'S Patent and several other kinds of fanning-mills, suitable for cleaning rice as well as grain.

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THE different sizes of rice hullers, with recent improvements manufactured expressly for us.

PERUVIAN AND PATAGONIAN GUANO.

JUST received, a fresh cargo of each of the above kinds of Guano, which will be sold at wholesale and retail, at the lowest prices.

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OF all sizes, from 6½ to 10 cents per lb.; suitable for fences

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THE celebrated white-flint, and other improved varieties of wheat, suitable for fall sowing.

RYE.

THE best kinds of winter rye.

TIMOTHY SEED.

A Prime article, constantly on hand.

RAY GRASS AND LUCERNE,

AND all other European Field and Garden Seeds suitable for the American climate, fresh imported.

A. B. ALLEN & CO.,
Oct. 1—1t. 189 & 191 Water St., New-York.

To Wool Growers, and those wishing to purchase Merino Sheep.

FOR SALE, low, about 175 Merino Ewes. The original stock were obtained of J. T. Rich, of Shoreham, Vermont, and Messrs. D. & C. B Cook, of Charlotte, Vt.—the latter gentlemen having recently obtained theirs from Mr. Atwood's and other celebrated flocks in Connecticut. The lambs and yearlings are from Atwood's and Rambouillet Bucks. Also, about sixty bucks of different ages, mostly young, bred by the subscriber. The average weight of fleeces, four pounds, nine ounces, washed wool

Address RICHARD KEESE,
Oct. 1—tf. Keeseville, Essex County, N. Y

THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, NOVEMBER, 1849. VOL. VI.—No. 11.

Foreign Correspondence.

Letter from Prof. Liebig's Laboratory.

Giessen, August 20, 1849.

EDITORS CULTIVATOR—A voice from this quiet little town of Giessen, would scarcely have made itself heard amid the roar of revolution that has been coming to you for the last eighteen months. Who wanted to hear about chemistry, when all Europe had converted itself into a laboratory of decompositions and recompositions on a so much grander scale? Meanwhile, things have moved on here very much as usual. The little town so well known to your readers through your old correspondent, Prof. HORSFORD, has, it is true, aroused itself sufficiently from its scientific repose, to amuse itself with a barricade or two in miniature; but, for the most part, it has been very quiet. An American can hardly comprehend how, amid such stirring events, there is so little general excitement. At home, who would be satisfied, high or low, without having read the last paper, without being in possession of the last item of news. Here there is no such evidence of intense interest in the mass of the people. The old passivity hangs still around them. No one is satisfied with things as they were, or as they are; all would like to see a radical change, but where are the men inclined to act? There are, it is true, a great many difficulties in the way of such a change. First of all, the fact that such a majority of the educated and influential among the people are directly in the pay of the several governments; that is, are office-holders. Almost every profession is made into an office here. Clergymen and professors, for instance, are directly supported by government. One word too freely spoken, and the supplies are stopped, to say the least. Again, the ignorance of that large class, the peasantry, is a great obstacle in the way of a radical change. Men must understand and feel their rights before they can assert them—they must feel their power also. Again, the strong sectional feeling. A revolution arises for instance in Baden. The army passes the Hessian frontier, expecting support. Somebody calls the advance an invasion, and down comes the Hessians upon the invaders. In the Prussians, this sectional feeling may be dignified by the name of national pride. Not that they are proud of their king, but of the power of the nation. Authority brings them into the army, fear holds them there, and makes them the instruments of the power they hate, and this petty gratification of pride of national power is their only reward.

Prussia is said to be at present concentrating a large force upon the Austrian frontier. The prospect of this demonstration is sufficiently obvious. It is a terror for the south and east, in case of a refusal to come into the northern alliance. It is a good omen for Hungary, but for Europe, who shall say what it forebodes? The south, involved as Austria is, in that most unjust of all wars with Hungary, cannot stand alone against the power of the north, but this does not make submission the more probable. May it not reckon with reason on foreign assistance? Would England, France or Russia regard with indifference the increase of the power of Prussia, that would result from such a war?

But enough of politics. LIEBIG'S summer course of lectures is nearly at an end. To-day, we had that most interesting chapter of modern science—the mutual relations of animal and vegetable life, particularly with reference to the atmosphere. In the hands of Liebig, this theme already trite, becomes invested with all the interest of a new discovery. And how beautiful in truth this arrangement of nature, according to which, each plant in its every breath, is a minister to the wants of animal life, purifying the air upon which it depends for existence, and in turn, deriving its own life and beauty from this act of beneficence. The discussion of the origin of the nitrogen of plants was one of the main points in this lecture. Liebig's views on this subject are known to your readers, through his work on Agricultural Chemistry. The ammonia of the atmosphere is a principal source. The determination of its amount recently made by Freseneus, may be interesting in this connection. He found about 1-3,000,000 carbonate of ammonia in the air of the day, 1-2,000,000 in night air. How such small quantities are estimated must appear mysterious to those unacquainted with the method of effecting it. The means are, however, very simple. To give an idea of the matter, we will suppose a hogshead filled with water, supplied with a cock below and an opening in the head above. On turning the cock the water runs out, and a corresponding volume of air comes in above and takes its place. If the water that has escaped is measured, we know that for every quart of it, we have a quart of air in the hogshead. Thus it is perfectly easy at any moment, to know how much air has come in through the opening above. Now we will suppose the hogshead full again, and to this opening a tube fitted, loosely filled with a substance that has such an affinity for ammonia, that it absorbs and retains all that approaches it. The cock is turned again; we let, say a hundred gallons of water run out and stop it off. One hundred gallons of air has consequently come in through the tube above, and left all the ammonia behind. We have the ammonia fast. All we have to do now is to weigh it; suppose it is a half grain; then a hundred gallons of air contain a half grain of ammonia.

From a recent English paper, I see that the fabrication of carbonate of ammonia, naptha, soda, &c., from peat, is commenced on a large scale in Ireland. The amount of the products must be overstated, but I believe this manufacture might be pursued in America with advantage. Ammonia has for years, been obtained in large quantities, incidentally in the manufacture of burning gas from bituminous coal. It owes its origin to the nitrogenized constituents of the plants from which the coal is formed; on distillation, the nitrogen and carbon share the constituents of water, forming carbonic acid and ammonia.

I have observed in the recent agricultural journals, certain new methods for the prevention of the rot in potatoes. With Klotzch's method of clipping the sprouts, when the plant is seven or eight inches high, and then again, four or five weeks later, you are probably acquainted. It does not seem to have realised the expectations excited by his statement. A farmer in this vicinity tells me that he has tried the method without success. It seemed to increase the vigor of the plants, but did not prevent the rot. Klotzch warns against cutting the sprouts more than half an inch.

A correspondent of the Agricultural Journal for Rhenish Prussia, recommends piercing the potatoes to be used for seed with a wooden instrument (the holes to be two or three in number and to reach the centre,) and then soaking them in water containing from two to three per cent. of sulphuric acid (oil of vitriol.) He supposes the infectious matter thus destroyed. He advises also plucking the blossoms to prevent infection from other fields, and planting deeper, inasmuch as it has been observed that the potatoes nearest the surface are generally most diseased. He professes thus to have raised potatoes, almost without exception, sound, while alternate hills, not thus treated, were very much diseased. Another correspondent of the same Journal uses gypsum, throwing it over the plants when moist with dew, and has equally conclusive evidence of the value of this means against the rot. He supposes the gypsum to act where applied, that is, upon the leaves and stalk. How it can act here, it is hard to say, for the usual conditions of its action are not present.

John Flock, of Montabour, Nassau, has recently published the following method as a specific against the rot. He leaves rather larger intervals than usual between the hills. When the plant has reached a convenient size, he hoes up the earth against it on one side, to one half its height, then bends the plant over horizontally, and forms the hill so that an inch or two of the plant projects from the middle of the slope. The plant on further growth, makes an angle at this point. The object of the contrivance is to lead off the rain, which otherwise follows the stalk to the roots, and carries with it the matter which causes the disease in the tubers. This view of the progress of the disease, acquires probability from the fact that after a rain potatoes before sound often become diseased and rot rapidly—again, from the fact that the disease commences on the outside of the tuber, and is worse nearest the surface of the ground; further, from two observations of Mr. Flock, that suggested his method, namely, that there was always most disease in the hills whose plants grew straightest, and consequently, through the influence of the wind, formed a funnel-shaped opening about the roots, which gave the rain easy access; again, that where the manure was applied in such a form and manner as to protect the roots in a degree from the rain, there was always least disease.

One of the recent chemical journals contains the records of a very interesting series of experiments on the necessary inorganic constituents of the oat plant. Single grains were sown in pure charcoal, prepared from sugar, this being contained in little tin vessels lined with wax. Without addition of any thing to the charcoal, a plant was obtained, but it was very small and sickly. Ammonia salts alone produced a plant of a lively green color, but still small and weak; increase of these in a second and third experiment killed the plant. The mixture, whose composition is given below, *exclusive* of ammonia salts, gave a plant of double the size. On supplying in another experiment, all the salts of the mixture, the weight of the plant was quadruple the last, but still weak for want of iron, as another experiment proved. The mixture,[*] with addition of oxide of iron being furnished, a much finer plant was obtained, but withered spots appeared upon its leaves. In another case, where the salts of the last experiment were not supplied, with addition of a little carbonate of magnesia, no such appearance was observed, and the plant was beside in all respects materially improved. It was ascertained further that soda could not be substituted for potash, nor magnesia for lime, without injury to the plant. Many other experiments with omission of individual constituents were made, from which it was inferred which are essential and which not. The conclusion from the whole investigation was that silicic, phosphoric and sulphuric acids, potash, lime, magnesia, iron, and manganese are essential constituents of the oat plant. The investigation was commenced so late in the season, that the development of the grain could not fairly be considered. The above conclusions have no reference to this point. More phosphates in proportion would certainly be required.

I give you below, the results of my own analysis of the ash of oats. The dry grains yielded 4.71 per cent. of ash. This ash contained, expressed in per cent., silicic acid, 53.97; sulphuric acid, 0.49; phosphoric acid, 17.35; lime, 3.00; magnesia, 7.08; potash, 12.94; soda, 2.02; oxide of iron, 0.60.

Prof. Liebig is at present engaged in re-writing his Animal Chemistry. Many of the chemists in his laboratory have been consequently engaged with investigations in this department. We are often rewarded with most interesting results; for instance, as the result of an investigation shared by three among us, we find that the composition of the inorganic part of the blood, of urine, and of the aqueous extract from meat, are most strikingly similar. The result was to be expected on theoretical grounds, but it was interesting to prove it. Such facts are not alone interesting—they are of important application. Another investigation, not however, very recent, proves that the whole character of the blood can be changed at will, and that in a very short period, by change of diet. I do not refer to a mere variation of the proportions of its constituents, but to *such* a variation as implies a material change of character, as for instance, the replacement of its alkaline phosphates by carbonates. That the influence of such a change in the constitution of a fluid that bathes all the nerves and tissues of the animal frame must be a very material one, is evident. Its efficiency in the treatment of disease, has been by no means fully tested.

You shall hear from me again soon.

Very truly yours, John A. Porter.

Household Comforts.—The female editor of the Pittsburgh Visitor, in recommending comfortable and *cheap* furniture for farmers' houses, in the form of settees or lounges, makes the following remarks: "I can tell no reason why rich folks, who do not work, should have *all* the comforts of life, while any one who pleases might have a good share of them by only thinking of it! I have many a time gone into the houses of rich farmers, when I thought their best room was not half as comfortable looking as their *barn*. Here one could find a nice place to loll and rest on the hay and straw; but there, there was nothing but bare benches and chairs to sit on, bolt upright."

---

[*] Composition of the mixture:

0.14	grammes	Silicate of Potash.
0 50	"	Carbonate of Lime.
0.04	"	Phosphate "
0 10	"	Sulphate "
0 04	"	Carbonate of Magnesia.
0.10	"	Nitrate of Ammonia.

A gramme is about 15½ grains.

The Relations of Science to Agriculture.

We copy the following from the last No. of the Journal of the Transactions of the Highland and Agricultural Society of Scotland. It was written by Dr. Anderson, chemist to the Society, and its practical and common sense view of the subject, will commend it to the attention of our readers:

The application of science to agriculture is a subject on which so much has been said and written, during the last few years, and which has occupied so much of the attention of the agricultural public, that it may seem almost superfluous to add to what has already been penned. It has always appeared to me, however, that there are still many points of great importance for the practical man to consider, which have either never been sufficiently prominently presented to his view, or which, from their being less striking, or perhaps less enticing, have been allowed to fall into the background, and have hence led to a certain amount of misapprehension in regard to the exact position of science and its relations to practice. Such misapprehensions it would be desirable under any circumstances, to dispel; but now that the Highland and Agricultural Society has actively taken up the prosecution of agricultural chemistry, it is of primary importance that the farmer and the chemist should come to a distinct understanding with regard to the mutual bearings of scientific and practical agriculture—the manner in which they can be made to assist one another—and, what is of all others the most important point, how can they be made to co-operate, so as to establish on a firm basis the general principles of agricultural science, which must necessarily be the first step towards the development of scientific practice. Under these circumstances, I have thought that I might advantageously refer very shortly to some of these matters, and point out what we are in future to expect from the application of chemistry to agriculture, the more especially as it is not very difficult to perceive that the interest which attached to it has somewhat abated with the general public, though I believe it to be undiminished with our most active and intelligent practical men.

This very diminution in the interest attaching to chemical agriculture, I believe to be mainly founded on one of the most serious misapprehensions—serious alike to agriculture and to chemistry—with which we have now to contend; and that is, the erroneous and altogether extravagant expectations which some persons entertained, regarding the extent and rapidity of the influence which chemistry is likely to exert upon agriculture. To hear them talk of it, one might almost imagine that chemistry, as by the wand of a magician, is at once to spread fertility over our barren moors, and raise abundant crops where nothing ever grew before; and that the chemist can by a few simple experiments, determine with absolute precision the circumstances under which the farmer must go to work, so as to produce an abundant crop. It needs not to be mentioned that such views are the exception, not the rule; but, between this extreme case and those likely to be fulfilled, there are many expectations which, with less apparent extravagance, are equally beyond the powers of chemistry in its present imperfect state, and involve questions which, if they ever can be answered, must await the advance of pure science to a point much beyond that to which it has yet attained. Nor is it, perhaps, matter of much surprise that such expectations should have been entertained, as it must be admitted that the general public is not in a position to estimate correctly the extent of the benefits which it is likely to derive from the application of science to any art; and, unfortunately, in the present instance, it has been misled by the far too laudatory terms in which the application of chemistry to agriculture, was talked of some years ago. Hopes were then excited which, to those intimately acquainted with chemistry, it was very evident could not be sustained, but which the enthusiastic embraced at once; only, however, when they were disappointed, to abandon as worthless, the whole science itself, along with the unobtrusive modicum of real progress, which was altogether lost sight of amidst the ruins of their lofty expectations. Even those who take a more cautious and sober view of the progress of agricultural chemistry are apt to be led into expectations greater than facts justify, by the extraordinary progress which the application of chemistry has effected in some other arts, such, for instance, as the art of bleaching and the manufacture of soda, which chemistry, by one great stride, raised from the state of primitive rudeness in which they had existed almost from time immemorial, to one at least of comparative perfection. Such facts may lead us at first sight to expect that the application of chemistry to agriculture should be followed by equally rapid results; but a little further consideration seems to point out a very material difference between such arts and the cultivation of the soil. In such a case as the manufacture of soda, for instance, and indeed in all those in which the application of science has produced the most marked results, the chemist has presented to him for solution a definite and circumscribed problem, involving the mutual relations of some three or four different substances; and he is able to trace the changes which the coal, common salt, and lime employed, undergo, from the commencement of the process through each successive step, until the soda is obtained in the perfect state; but in the art of agriculture each question frequently involves, not one, but many problems, connected with the highest and most abstruse doctrines of the science, in which not merely chemical forces, but the far more recondite phenomena of life come into play, and in which the investigations of the chemist are carried on, and his conclusions tested under the influence of weather, climate, and many other perturbing causes.

The extreme complexity of the problems with which agricultural chemistry has to deal, may be conceived from the fact that most plants contain from twelve to fifteen different substances, all essential to their existence, the relations of which must be investigated before definite views can be obtained regarding the changes which go on in the organism of the plant. These relations, moreover, are far more complicated than even the number of the elements alone would lead us to suppose: the single element of sulphur, for instance, which does not constitute more than two or three parts in the thousand of most plants, exists there in not less than three different forms of combination, in each of which it is as essential to the plant as those which form the great proportion of its bulk. Now, it must be sufficiently manifest, that questions involving elements of such complexity are not to be solved as rapidly or easily as the far simpler problems of mineral chemistry, and that not merely on account of their superior complexity alone, but because, in the one case, theoretical chemistry sets us far on our way towards the solution, while in the other there is still a great gap to be filled up, a whole mine of scientific facts to be worked out, before we are in the condition to approach sufficiently near the comprehension of these more complicated phenomena. In fact, the latter are not questions of *pure* chemistry, but are intimately interwoven with vegetable physiology—so much so, indeed, that in many instances it is scarcely possible to decide to which of these two sciences they ought strictly to belong. And it is just herein that their great difficulty consists, for there is nothing more certain, than that those questions which lie, so to speak, on the confines of two sciences, require for their successful investigation a high degree of development of both the sciences on which they depend. Now, chemistry is still far from having attained all that development of which it is capable, as the time during which it has been cultivated has not been sufficiently long to admit of much progress, except in special departments. Few of those who are not themselves chemists, are aware that the facts and doctrines of modern chemistry have been determined during little more than the last sixty years; and that, with few exceptions, all the laborious investigations of the older chemists, and, without exception, all their general doctrines, were then swept away, to be replaced by the science as it now exists; while organic chemistry, with which agriculture is more intimately connected, has been successfully prosecuted for not more than half that period.

To expect any *rapid* advances, in the practical applications of agriculture, of chemistry in its present state, is manifestly unreasonable. The progress must necessarily be slow, in some instances almost imperceptible; and much must be done which at first sight the practical agriculturist may be inclined to consider altogether foreign to his object. Extended researches will frequently be requisite which do not directly lead to practical results—that is to say, which are not immediately convertible into an equivalent of current coin, but which are the foundation of such results, and form the starting point of perhaps a very different series of experiments, having an immediate bearing upon practice. It is of great importance that this should be distinctly understood and borne in mind, for it is by no means uncommon to suppose that nothing more is necessary than at once to convert scientific facts to practical purposes; while, so far from this being the case, the agricultural chemist has a two-fold duty to perform—he must both determine the scientific facts of agriculture, and eliminate from them the practical conclusions to which they lead. It may, perhaps, be said that the establishment of these facts falls within the province of the pure chemist. But if this principle were to be acted upon, the progress of chemical agriculture would be slow indeed; for the investigations of the pure chemist lead him now, and are likely for a very long period to lead him, in directions very remote from those most likely to afford the materials which the agricultural chemist requires to work upon. The latter would, therefore, require to sit idly waiting till the former supplied him with facts, which his own exertions would have enabled him to ascertain. Nay, the agricultural chemist may even do a better service to agriculture, by pursuing the investigation of those apparently theoretical subjects, than by directing himself to those which seem to have the most immediate practical bearings.

There is another point on which there has been a good deal of misunderstanding between the chemist and the agriculturist, which is intimately connected with the erroneous estimate of the extent and perfection of chemistry. It is not uncommonly supposed that the chemist is in the condition at once to solve, by the investigations of the laboratory, all such questions in practical agriculture as may happen to be submitted to him—that he can determine when nothing else can, why certain methods of cultivation are successful, others unsuccessful. It is just possible that he may in some instances be able to do this, but far more frequently his researches enable him not to state positively what is or what is not the case, but rather to draw a probable conclusion—to form, in fact, a hypothesis, which is not in itself a truth, but which must be further tested by experiment in the field, whereby it may be either confirmed or entirely refuted. Now, very unfortunately, this hypothesis is often taken for a positive statement; and when it turns out to be erroneous, it is immediately held up as an instance of the fallacy of science by those who, not being themselves acquainted with the method of investigation by experiment, are unaware that all scientific facts are developed in such a manner. No one ever thinks of going fortuitously to work, when he proposes to determine a scientific fact. He first weighs all facts of a similar character, or having a bearing on the subject which he desires to elucidate, and then founds upon these a hyyothesis, the truth or fallacy of which is to be tested by experiment. Now, without any explanation, it has frequently happened that such hypotheses have been handed over to the practical man, whose field experiments having refuted them, he has forthwith abandoned the science which seemed to him to give erroneous results, not knowing that these results were only in progress of being arrived at by those very experiments which he was engaged in performing. The very same process has been employed in the application of science to every other art; but the difference between them and agriculture is, that, with the former, the hypothesis is formed and the experiments executed by the same person; in agriculture, the hypothesis must in many instances be handed over for experimental elucidation to the practical man. The many failures which are made in other arts remain unknown to all but those by whom they have been made, while in agriculture they become known to all and sundry; and by them it is not understood that, though these results are negative, they still serve to bring us all nearer to the truth.

And this leads me to observe, that the true manner in which chemical agriculture is to be advanced, is not merely by the exertions of the chemist, or the labors of the laboratory alone. It must be by the simultaneous efforts of science and of practice, each endeavoring to develop, with care, steadiness and accuracy, the facts which fall within its province. Nor must each pursue its own course irrespective of the other. They must go hand in hand, and, taking advantage of each other's experience, and avoiding all sort of antagonism, they must endeavor to co-operate for the elucidation of truth. The chemist and the practical man are, in fact, in the position to give each other most important assistance. The one may point out the conclusions to which his science, so far as it has gone, enables him to come; while the other may test these conclusions by experiment, or may be able, from his experience, at once to refute or confirm them. But it will not do to imagine that there is here, either a triumph or a defeat. Such a spirit cannot be anything but injurious. It is rather to be looked upon as a fortunate state of matters, which, admitting of the examination of our own conclusions from two different points of view, directs us with the greater certainty in the path of truth.

For the development of agricultural chemistry in this manner, the Highland and Agricultural Society appears to me to possess peculiar advantages. It has within its own body a large number of members, who are both able and willing to assist in furthering its views in this direction by experiments in the field; and I am glad to say that some are actually already commenced, the results of which I hope, at no very distant period, to communicate to the Society.

As it may be interesting to the members of the Society to learn the nature of these investigations, I shall state very shortly, the method in which we propose to pursue the work of the laboratory. Our plan is, as far as possible, independently of the ordinary analyses of manures and the like, to carry on two different classes of researches. 1st, Extended investigations on subjects of interest and importance, and the completion of which must necessarily occupy a considerable period; 2d, shorter investigations of subjects of a more circumscribed character, which do not occupy so long a period, and 3d, subjects which, from their consisting of isolated portions, may be taken up in the intervals which occur in the investigations of other matters.

In the former of those classes of investigations we are now engaged with a series of experiments for the purpose of determining, as far as chemistry can, the relative feeding values of different grains, and other ordinary sorts of cattle food—our object being so to determine their values that the farmer may know what quantity of any given sort of food he ought to substitute for that he has ordinarily employed, when the price of the former falls so low as to make it advantageous to use it. In this way the farmer will be enabled to employ the produce of his own farm, in place of disposing of it at low rates, and purchasing foreign cake or other foods. The subject is one of considerable difficulty, but when completed it will, I hope, serve to throw some light upon the principles of successful feeding; and it is our intention to extend it to our root crops, and to the different sorts of grass employed for hay, as opportunity may offer. Another question, now under investigation, is the alleged inferiority of the butter of cows fed with turneps grown with guano, to that of those fed with turneps grown with ordinary manure. I do not expect, however, that we shall be able to complete this till the close of the present season, as it was begun at too late a period to admit of our obtaining the turneps of the last crop in their best condition. Turneps, however, are now being grown both with and without guano, by means of which we shall be able to investigate this matter more fully than we have yet been able to do. In connection with the turnep crop, we have also made arrangements for determining the cause of the different feeding value of turneps grown in high and low districts, and the chemical department of which will be entered upon as soon as the turneps now being grown expressly for this purpose, are ready.

The subjects belonging to the second and third classes are of too special a character to render it necessary for me here to go into any details regarding them. I shall only mention that one is a careful series of analyses of standard soils from different parts of Scotland—a thing which is much wanted; for, notwithstanding all that has been done in agricultural chemistry, we are still very far from having a correct knowledge of the constitution of the soils best adapted to different crops.

It will be seen, from what I have now mentioned, that we are occupied with a large amount of work, the satisfactory completion of which will require a considerable time, but from which, I trust, we shall obtain results alike creditable to the Society and advantageous to agriculture. Of this I entertain little doubt; but I may be permitted to observe, that my chief fear for agricultural chemistry is, that the constant craving after immediate results on the part of the agricultural public, may lead to the publication of hurriedly and imperfectly performed investigations. The chemist knows well how desirable it is to weigh and repeatedly to examine all his results, and to proceed cautiously and slowly: while the agriculturist, though in his own operations he is content to cast his seed upon the ground, and wait patiently for the harvest, is too apt to imagine that the tree of science bears fruit at all seasons, though, in point of fact, the patient waiting for results is a most necessary element of scientific progress. If this error is avoided, I am convinced that good results will be obtained, and that all men will in time be convinced that the slow and careful determination of scientific facts, is likely to become one of the most important assistants in the improvement of practical agriculture.

Take care of all vegetables and fruits before the frost becomes severe.

Practical Farming.

Premium Farm of E. C. Bliss, Westfield.

In our September number, we gave the statement of Mr. Foster, who received the first premium on farms, from the N. Y. State Agricultural Society. We herewith present from the *Transactions*, the statement of Mr. E. C. Bliss, of Westfield, Chautauque county, who received the second premium for the best cultivated farm.

Soils, &c.—My farm is situated 2½ miles south of Lake Erie, and 60 west of Buffalo. It contains 110 acres of arable land, and 40 of wood land, in all 150 acres. The soil varies. Some sandy loam, some gravelly loam, and some clay; with clay subsoil, no limestone, nor rocks, but sufficient sizeable stones for all needful purposes on the farm.

Rotation.—I manure well and pursue generally a three years' rotation of crops. For clay soil; first a good coat of coarse manure on the turf, then plow and harrow, fitting it for corn or other hoed crop. After removing this crop, the same fall, the ground is again plowed and harrowed, and fitted for getting in an early spring crop. In the spring sow to some small grain. After this crop is removed, manure again, plow and fit for the third spring crop, which is usually barley, as that is preferable for seeding with. Then seed with clover or timothy. Gravel and sandy soils are treated some different, as they are suitable for winter wheat. After manuring and plowing well, in preference to summer fallow, I sow to peas, or peas and oats; in the fall sow to winter wheat. By this management I have raised 21 bushels peas per acre. The following crop of wheat averaged 28½ bushels per acre. Upon removing this crop, I next plow the ground, and apply fine manure, then drag well and sow to winter wheat, and in the spring sow to clover.

Plowing.—The usual depth is from 6 to 8 inches. In all cases as deep as the plow will run and turn the turf well. The effect of this deep plowing is good, although on clay soil the first crop will not be better than that of shallow plowing, still the succeeding crops will be far better.

I have in one instance tested deep and shallow plowing. I divided a field into two parts, and plowed one part four and the other ten inches deep, and planted both to corn. The first crop proved the shallow plowing the best, but the following year I pursued the same course with the same pieces, and found the deep plowing produced a crop nearly double the shallow; a convincing proof to my mind that deep plowing is much preferable.

Manures.—About 40 loads per acre. I throw the manure from stable windows under temporary sheds, in order to protect it from rains, having one cellar 18 by 25 for manure, over which are stabled 6 horses through the winter. My means for making manure are through my horses, cattle, sheep and hogs, to which I feed hay, carrots, potatoes, corn fodder, &c., during the winter. The sheep are principally fed under large sheds, from racks made for the purpose. Each of my yards has a basin dug to retain all the fine particles of manure, urine and wash of the yard, besides having a large basin in my barn yard for the same purpose. Part of my straw I stack in the yards, and the remainder reserve for bedding for the different animals during the winter, and keeping the yards well littered, &c., all to increase the manure. My horses and cattle are all fed from stables during the winter. My hog pen and yards are another great help in making and collecting manure. Their manure is thrown from the pens into a yard, together with all refuse from the kitchen, occasionally a few loads of leaves, coal dust, horn shavings, refuse hair and lime, &c., from the tannery. The store hogs have access to this yard, and by this means it is all worked into good manure. This yard is under cover. I usually manufacture about 400 loads annually, and apply it all, and for the last 5 years I have purchased about 200 loads annually, from the village (1 mile distant,) and appropriated it all to use, paying one shilling per load. The most part in its long or green state, applied to fields designed for hoed crops. What is obtained from the village and barn yards during the summer, is hauled into the fields and piled, to be applied to small grain as wanted after sufficiently rotted; piles covered with earth or leached ashes.

I have used lime on wheat several times, and with good results; by spreading it from the wagon with a shovel after it was air slaked, at the rate of 30 bushels per acre. Have applied plaster in the usual way to clover, and derived a decided benefit; also applied it to corn hills after the first hoeing, about half a gill per hill. Some seasons it has been beneficial, but others I have reaped little or no gain. In one case, used salt as an experiment. After fitting one acre well for flax, to one quarter of it I applied half a barrel of salt, to another quarter 6 bushels slaked lime, but to the remainder nothing, and sowed the whole to flax. There was no perceivable difference between the part containing the salt, and that of the lime, so I harvested them together, and the other half by itself. The final result was that I obtained 2½ bushels seed, and 52 pounds lint more from the part having the salt and lime, than from the other. I have also used about 150 bushels of horn shavings, (obtained from a comb factory) on corn, by applying a single handful to each hill, previous to putting in the seed. According to the best estimate, the crop was increased from 15 to 20 bushels per acre. But as none of the field was exempt from the shavings, we could not tell the precise amount. Comparing it with previous crops on the farm, it exceeded any by 20 bushels. I have also used muriate of ammonia for soaking seed corn, but perceived no benefit.

Tillage Crops.—I have tilled about 35 acres this season. 10 acres winter wheat, 8¾ acres corn, 3½ acres spring wheat, 4 acres oats, 2 acres barley, 1 acre flax, 1 acre beans, 1¼ acres broom corn, 1 acre potatoes, 2 acres peas, ½ acre turneps, ¼ acre carrots. The ground on which the oats, potatoes, and part of the corn was raised, (amounting to 8 acres) has this fall been sown to winter wheat.

I usually sow 1½ bushels winter wheat per acre, from 10th to 20th September; if later, 2 bushels seed, always soaked in strong brine, and dried by rolling in plaster or slaked lime. Barley, brined and limed, sown April 18th, 3 bushels per acre. Spring wheat sown at the same time, 2 bushels per acre, brined and limed as the above; 3 busheis oats per acre, sown April 4th; flax sown 17th April, 1 bushel per acre. The ground for these spring crops is usually plowed and dragged in the fall, so as to be ready for early sowing in the spring, and in the spring I harrow the ground again previous to sowing, and after sowing harrow again, and pass over with light roller. My crops are all harvested in the usual way, by cradling or reaping, and threshed by machine. Corn planted from 10th to 20th May, about 8 quarts per acre, 3 feet one way, and 1½ to 2 feet the other, and thin out to three stalks in a hill. The corn is usually cultivated by passing through with cultivator or drag, and hoed twice, but avoid hilling as much as possible. It is all cut up in September, husked and housed as soon as practicable, usually from 60 to 80 bushels per acre; have not yet ascertained the amount of the present crop. From the 4 acres oats, I have 241½ bushels; 46½ bushels barley per acre. Beans 32 bushels per acre. Winter wheat not yet all threshed, but judging from what has been threshed, it will go over 25 bushels per acre. Potatoes about 300 bushels per acre, with 22 bushels seed planted. Of peas, I usually sow 4 bu. per acre; product about 20. One small lot of wheat on new land, went over 40 bu. per acre.

I prefer long manure for all hoed crops, spread on the surface and plowed under in the spring. For wheat and other small grains, I prefer using it in a slightly decomposed state. This manure is spread on the ground after plowing, and then mixed with the soil by harrowing. Usually 40 loads per acre for hoed crops, and vary the amount for small grains, according to the condition of the soil.

For all hoed crops, the manure is covered as deep as the team can turn it under with the plow, on any of my soils, while for small grains it is spread upon the surface and mixed 3 or 4 inches deep.

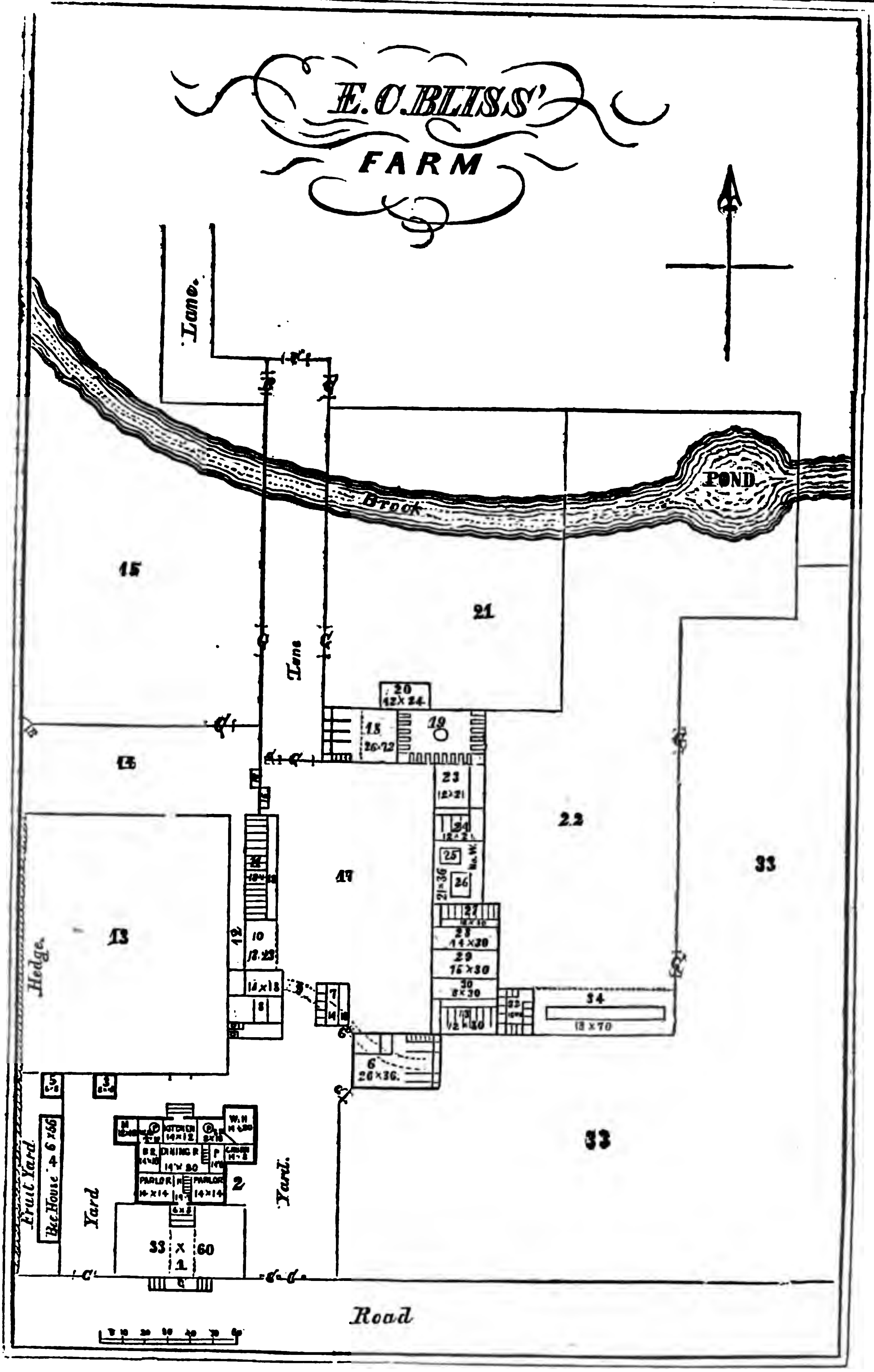
My potatoes have been slightly affected for several years. I know of no remedy. The early planted ones usually do the best.

Grass Lands, &c.—Principally timothy and clover. From 14 to 16 quarts timothy seed are sown in the fall with wheat, or in the spring with barley or spring wheat. About 8 quarts of clover seed is sown on light snow in March, upon winter wheat, or in April or May with spring wheat or barley.

I usually cut from 35 to 40 acres of hay annually; this year averaged 1¾ tons per acre; some seasons not as much, and others more than this. My timothy is cut before fully ripe, or previous to the blossoms dropping. It is mowed down and laid in swath during the day; the following morning it is shook out, and in the afternoon raked up into winrows, and is either left in the winrow, or cocked up until the next day, when it is again opened if not sufficiently dry, and in the afternoon it is housed. The clover is usually cut before the timothy, and as soon as the heads are in bloom. This hay is mown and shook out the same day; the next day it is raked and cocked, and allowed to remain in the cocks two or three days. They are then opened in the forenoon, and in the afternoon put in the barn.

Draining.—A small piece of land has been reclaimed, which was formerly so wet and boggy as to be useless. The following manner was pursued: First enclosed it with a ditch, then from different parts of this, dug several, partly across the piece. This so dried the ground as to enable me to draw on stone, and stone up all the ditches. They were stoned in the usual way, by placing two rows of stone from 4 to 6 inches apart, and then covering with large flat stones, after which it was covered with earth. This so drained the land, that the next season I removed all shrubs and bushes, plowed and planted it to potatoes and corn; raised a middling crop considering the ground. The succeeding crops were oats, flax, barley, and seeded with timothy, half bushel seed per acre. These crops were all very good, (some took county premiums.) This season, about the middle of July, this piece was mowed, and after well hayed, was raked up; for the purpose of forming an estimate, per acre, one load was taken to the village and weighed; the result was 3½ tons per acre, as near as could be calculated. This field was again mowed in October, well hayed, and a load taken as before and weighed, from which an estimate was made; the result 2¼ tons per acre for the second crop, making 5¾ tons in one year. I have also practiced underdraining on my farm, which has served two purposes: First, benefiting the land, making all wet spots dry and suitable for plowing. Second, a portion of these drains are centered in a large reservoir, from which the water is conveyed in cement pipe about 60 rods to my farm buildings, and thence distributed by leaden pipes wherever desired, always having an abundant supply of water. The amount of underdrain is rising 600 rods.

Domestic Animals.—One pair working oxen, 4



85—PLAN OF E. C. BLISS' FARM.

cows, 12 young cattle, Hereford bull, 1 span work horses, 1 of breed mares, and 4 young horses. These breeds of cattle are not pure blood, but crosses of Devonshire, Durham and native.

My cattle are all wintered in good warm stables, and furnished with corn fodder, chaff and roots as long as they last, then have hay, cob and corn meal the remainder of the winter. In pleasant weather they are allowed to run in the yards through the day, where they have access to straw stacks and water. In this manner my cattle are kept in a thriving condition through the winter.

About 300 lbs. butter and 200 cheese are usually made per annum from four cows, and after the usual manner.

The number of sheep is 200. They are from one-fourth to full blood merino, averaging about 3 lbs. per fleece. About 200 lbs. of this is manufactured at home; the residue this year sold for only 25 cents per lb. in our place. About 100 ewes produce lambs; from 90 to 100 lambs reared. Sheep are very low here now; the butchers will pay only from $1 to $1.50, and for lambs from 62½ cts. to $1.

My sheep are wintered in yards, provided with water, and good sheds, with racks and troughs under them, where I feed with hay, straw, bean and pea vines. Usually commence feeding my breeding ewes with oats, oil meal, or broom corn seed, about the first of February. Usual loss, 3 per cent. per annum.

My swine consist of 1 Leicester boar, two Leicester sows, six barrows now fattening, and nine pigs, all the above-mentioned breed. These swine are furnished with the refuse of the farm and kitchen during the summer, and have access to the pasture and falling fruits of the orchard. Those intended for fattening, are put up in October and fed with steamed potatoes and apples for about 6 weeks, then fed with cooked corn or barley for about four weeks, on which they fatten rapidly. My spring pigs are butchered at 8 months old, weighing about 250; last year, by extra pains, they went over three hundred, when dressed; some at eighteen months, weighing from three to four hundred.

I have made no experiments with root crops, as to their relative value when compared with corn; but usually feed two or three hundred bushels potatoes and carrots to my milch cows, working horses and oxen, and find them nearly equal to oats.

Fences, Buildings, &c.—For explanation please refer to the diagrams annexed.

No. 1 is front yard, elevated above the level of the road by means of stone wall, backed up by earth, and crowned with a good picket fence; X portico and stone steps. No. 2, dwelling house, one and a-half stories high, consisting of drawing-room, parlor, hall, dining-room, bed-room, kitchen, well-room, cheese-room, pantry, sink-room, wood-house, &c., on the first floor, and upper story consisting of parlor chamber, lodging rooms, clothes presses, &c. Also a cellar, 30 by 38, consisting of bake room, fruit cellar, vegetable cellar, store room and larder. No. 3, smoke and ash house with stone bottom. No. 4, bee house. No. 5, water closet. No. 6, carriage house and horse barn. No. 7, corn barn. No. 8, hog and pig house, consisting of passage way, arch, water reservoir, brought by means of lead pipes, and 4 apartments, with stone floor as a basement, and a principal story above consisting of work shop and tool room, 12 by 30 feet; also steam room, 12 by 18; also, garret above for lumber, &c. No. 9, tunnel under ground, communicating from hog house to orchard. No. 10, open shed and manure basin. No. 11, stable for young cattle. No. 12, passage from hog house to young orchard. No. 13, garden, (vegetable) well enclosed with a good pale fence. No. 14, calf yard. No. 15, peach and pear orchard. Nos. 16 and 16, reservoirs of water, brought from main cement pipes, through small leaden ones. This cement pipe is made of water lime and sand, and laid 2½ feet under ground, conducting a stream of water 1¼ inches in diameter, some 60 rods from a main reservoir created by under draining, which affords an abundance of living water at all seasons of the year, for all house and barn purposes. No. 17, barn yard in which is a large basin some 2 feet deep, which receives a principal part of the wash of the yard, and retains all the fine particles of manure. No. 18, horse barn, with hay loft and manure cellar, 18 by 25. No. 19, store room and apple grinder, with hay loft, and sheep-fold basement. No. 20, cider press with loft for storage. No. 21, sheep yard. No. 22, sheep and poultry yard, enclosed with tight board fence, with pickets and wires, &c. No. 23, open shed with feeding trough. No. 24, stable for oxen. No. W, machine house, containing horse power, which drives threshing machine, wood saw, straw cutter, &c. No. 25, circular saw, for sawing wood, &c. No. 26, horse power, (railroad patent) hay loft over all. No. 27, stable for cattle, with loft above for hay or grain. Nos. 28, 29, 30 and 31, threshing floor, bay for grain or hay, passage way, and stable for cattle, with a good loft over all for hay, grain or fodder. No. 32, poultry house. No. 33, orchard. No. 34, sheep shed.

Fences.—My fence is mostly made of good substantial chestnut rails, after the usual form of worm fence, with the corners well locked. I have 138 rods of board fence on cedar posts, 4½ feet high; also 25 rods pale fence. The board and pale fence cost 75 cents per rod. There is 1,746 rods of the rail fence, and 31,428 rails, which were all split from timber growing upon the farm. Cost $5 per thousand for cutting and splitting; the same for drawing and laying up, which will be 18 cents per rod. The total length of these fences is 5 miles and 309 rods. So much fencing on the farm is in consequence of a road running on two sides of it, and another across the south end. I also have a lane 3 rods wide extending from my barns through the centre of the farm to the road south, where I have a tunnel under the road, that my stock can pass to and from the pasture on the opposite side. The fields are principally arranged to enter from this lane. The condition of my fences is good, and all of durable timber—made 7 rails high, equaling 5½ feet.

Farm Accounts.—All my crops are accurately weighed or measured, excepting the hay and corn fodder. Correct accounts are kept of the loads of hay and bundles of corn fodder, and occasionally a load of each are weighed, that I may ascertain nearly the amount of each raised. It is all set down in my farm book, and enables me to ascertain the amount of stock that can be wintered, besides other benefits accruing from this accuracy. I keep tackle and large steelyard for the purpose of weighing hay or other feed for different animals, for my own convenience and satisfaction, to ascertain the expense of keeping, &c. My accounts are all daily registered with such minuteness as enables me to know the expense or income of all my transactions. Debt and credit is kept with each field, with the same precision as with individuals.

I keep accurate and regular farm accounts, and the annual expense of improving, and the income from it, is kept with such exactness and precision as enables me to strike an accurate balance of the debt and credit at the close of each year. A memorandum is kept through the day, of the kind, cost and amount of labor in each field, and at night all is minutely registered in my farm book. I have a diagram of the farm, on which all the fields are numbered, and regular debt and credit is kept with each field. Also an inventory is taken of all my stock, tools, debts, dues, &c., at the close of each year, which enables me to know my exact valuation; also to know my progress from year to year. The practice of keeping our farm accounts accurately would most certainly conduce to close observation, make us more careful in all our farming operations, and in the end make us more thorough, systematic and profitable farmers. The expense of labor on my farm the present year, up to the first of December, amounts to $517.21, but about $300 of this has been expended in cutting wood and burning coal, from such of my timber as was not valuable for other uses. I found ready market for it in our village, and always returned with a load of manure, when it was to be obtained. This coal and wood to the present time amounts to $954, a sum sufficient to pay all the expenses of the farm, (including the cutting of wood and burning coal,) and leaves an overplus of $436.79. I will here state the cost per bushel of raising some of my crops: wheat, 38 cents per bushel; barley, 28 cents; oats, 12½ cents; beans, 36½ cents; timothy seed, 93½ cents; potatoes, 8¾ cents; hay, about 8s. per acre. My work is principally performed by persons hired by the month; pay from $8 to $12 per month. Have three small dwelling houses that I usually rent for about $90 a year to some of my help.

New-York State Agricultural Society.

Premiums awarded at Syracuse.

(*Continued from page* 307.)

Honey—Best 20 lbs., to Aaron Goodwin, Brownville, $5.

Bee Hives—Dugdall's patent Moth-proof, Thomas M'Clintock, Diploma.

Reeled Silk—1. (name not ascertained) Diploma and $5—2. N. M. Coburn, Stockbridge, Trans.

Sewing Silk—1. Jeffrey Hutchinson, Riverhead, $6—2. Parmelia Staats, Buffalo, $5—3. N. M. Coburn, Trans.

Cocoons—But one lot—no premium.

Linen—10 yards—1. Mrs. J. Harrold, Pittstown, $8—2. Mrs. C. Avery, Perryville, $6—3. Mrs. Nelson Van Ness, $4.

Diaper—10 yards—1. Horace Clark, Skaneateles, $6—2. Mrs. J. T. Van Namee, Pittstown, $4—3. Joshua Beard, Milo, $2.

Tow Cloth—1. Mrs. Catharine M'Knight, Syracuse, $5—2. to do., Trans.

Cotton Stockings, Knit—1. Mrs. Wm. Wright, Vernon, $2—2. Mrs. H. Wier, Pittstown, Trans.

Linen Stockings, Knit—1. Mrs. Geo. D. Loomis, Westmoreland, $2—2. Mrs. W. Baker, Lima, Trans.

Sewing Thread, linen—1. Mrs. C. M'Knight, $2—2. Mrs. Levi T. Marshall, Vernon, Trans.

Discretionary—Four cotton stand cloths, Han. Earl, Granby,	$2
One linen seamless bag, Mrs. Wier, Pittstown,	$1
Six grain bags, Aaron Goodwin, Brownville,	1
One skein of yarn, A. Howland, Stillwater,	1
Ten yards linen cheese strainer, S. W. Abbott, Kirkland,	2
Bunch comforter yarn, and zephyr yarn, and cruels, Mrs. C. M'Knight,	1
Skein stocking yarn, Mrs. D. S. Severance, Truxton,	1
3 skeins woolen yarn, J. C. Collins, West Turin,	1
Very superior tent for show grounds, E. C. Williams, Rochester,	Dip.

MANUFACTURES.

Case blue and black broad cloths, Utica Globe Mills,	Dip.
Three pieces black broadcloths, D. Kellogg, Skaneateles,	Diploma and medal.
One box and two bales sheeting, Jones' Cotton Mills, Seth C. Jones, Rochester,	Dip.
Mousselin de Laines, J. T. Van Namee, Pittstown,	Dip.
Twenty-eight woolen shawls, very fine, D. Kellogg,	Sil. Medal.
Four pieces fancy cassimeres, D. Kellogg,	Trans.
Three pieces three ply carpets, very good, Schenectady Steam Mills,	Dip.

NEEDLE, SHELL AND WAX WORK.

Best ornamental needle work, Miss Mary M. Chase, Chatham,	Dip. and $3
Best ottoman cover, Mrs. T. M. Wood, Syracuse,	Dip. and $3
Best group of flowers, Miss M. A. Van Voorhees, Lyons,	Dip. and $3
Best variety of worsted work, Mrs. R. Howitt, Genesee,	Dip. and $3
Best fancy chair work, with needle, two worked worsted chairs, Mrs. H. S. Lansing, Albany,	Dip. and $3
Fancy chair work, Mrs. C. M. Burnett, Syracuse,	Dip. and $3
Best fancy arm chair, worked back and seat, 2d premium, Jane McElroy, Albany,	Dip. and $2
Best worked handkerchief, Mrs. H. R. Smith, Fredonia,	Dip. and $3
Best woolen shawl, Luman Shepherd, Skaneateles,	Dip. and $3
2nd do., Mrs. Aaron Goodwin, Brownville,	Dip. and $2
Best worked quilt, Miss C. Hammond, Skaneateles,	Dip. and $3
Best white quilt, John T. Clarke, Onondaga,	Dip. and $3
Best port folio, worked, Miss E. Cheeseboro, Syracuse,	Dip. and $3
Best silk bonnet, Mrs. W. A. Cook, Syracuse,	Dip. and $3
Best straw bonnet, Miss Mary Maybee, Syracuse,	Dip. and $3
Best lace capes, Miss Emeline F. Wagner, Fort Plain,	Dip. and $3
Best lamp stand mat, Mrs. S. Breese, Skaneateles,	Dip. and $3
2nd do., Mrs. A. Howland, Stillwater,	Dip. and $2
Best shell work basket, Mrs. Wm. Baker, Livonia,	Dip. and $2
Best wax flowers, Mrs. M. A. Van Voorhees, Lyons,	Dip. and $3
2nd do., Miss Sarah C. Teller, Syracuse,	Dip. and $2
Discretionary.—Nine pieces needle work, Miss Pardee, Oswego,	Dip. and $3
Fancy chair work, Mrs. A. Elmendorf, Palmyra,	Diploma.
Needlework, lady's skirt, Miss M. Wynkoop, Syracuse,	Diploma.
Specimen of embroidery, port folio and picture, Miss Mary A. Fleming, Manlius,	Dip. and $3
Piece needlework, imitation embroidery, Mrs. D. O. Kellogg, Troy,	Diploma.
Case of needlework, linen, Mrs. A. G. Dayan, Turin,	Diploma.
Black lace veil, Mrs. A. Howland, Stillwater,	Trans.
Pair of ottomans, Miss Mary Seymour, Syracuse,	Diploma.
Two ottoman covers, Mrs. John McCarthy, Syracuse,	Diploma.
Table spread and silk quilt, Mrs. O. S. Gillett, Fayetteville,	Dip. and $3
Embroidery, Miss Sarah M. Burns, Canajoharie,	Diploma.
Worsted needlework, Miss E. Terry, Mt. Morris,	do
Ornamental needlework, Miss E. Dorr, Albany,	do
Embroidered rocking chair, Mrs. A. Pruyne, Oswego,	do
Case of fancy and domestic articles, Mrs. B. R. Voorhees, Amsterdam,	Dip. and $3
Cambric handkerchiefs, Miss A. M. Hill, Canton,	Diploma.
Bed quilt, Mrs Royal Wilcox, Watertown,	do
Worked curtains, Miss Emily P. Weed, Albany,	do
Bed spread, Mrs. Aaron Goodwin, Brownville,	do
Counterpane, A. Bartlett, Syracuse,	do
Worked quilt, Mrs. M. Gildersleeve, Albany, (84 years of age,)	Dip. and $3
White cotton bed quilt, Mrs. D. S. Severance, Truxton,	Diploma.
Table spread, Mrs. J. W. Hickox, Syracuse,	do
Calico quilt, Mrs. Jane M. Wright, Geneva,	do
Knit sash and shawl, Mrs. A. Goodwin, Brownville,	do
Cambric quilt, very fine, Mrs. Walker, Georgia,	do
Knit bed spread, Mrs. D. R. Holmes, Richland,	do
Worsted needlework, Mrs. E. Allen, Newark,	do
Portfolio worked, Miss Mary Murdock, Clarkson,	do
Net lace cape, Miss Elizabeth Cook, Fort Plain,	do
Moss lamp mat, Mrs. A. Howland, Stillwater,	Trans.
Dress coat, R. Titsworth, Syracuse,	Diploma.
Pair divans, Mrs. J. L. Greenman, Syracuse,	Diploma.
Knitted bed spread, coat, tidy, and two bead baskets, Miss Pixton, blind girl, Westmoreland,	Dip. and $3
Three pairs slippers, purse, &c., Miss A. J. Kidder, Syracuse,	Diploma.
Case of flowers, Mrs. T. M. Wood, Syracuse,	do
Confectionary work, Wm. Ragg, Syracuse,	do
Needlework, Mrs. C. Huntley, Syracuse,	do
Lace veil, Miss S. Buel, Waterville,	$1
Fancy piece of embroidery, Miss M. Seymour, Syracuse,	Diploma
Fire screen, Miss Sarah B. Gillet, Syracuse,	do
Chair back of needlework, Miss Mary Gillet, Syracuse,	do
Lot fine shirts, K. V. R. Lansingh, Albany,	do
Worked bird of Paradise, Mrs. A. L. Green, Utica,	do
Gipsey telling fortune, needlework, very fine, Mrs. N. Clute, Louisville, Ky.,	do
Two small cases wax flowers, S. B. Gray, Syracuse,	do
Two caps and one head dress, Mrs. W. A. Cook, Syracuse,	do
Three caps, Miss Maybee, Syracuse,	Trans.
Pair worked worsted suspenders, Miss Amelia Wallace, Syracuse,	Diploma.
Six pieces thread lace, Misses Sarah Ann and Lavina Beverstock, Ogdensburgh,	do
Gentlemen's dressing-gown, Mrs. J. S. Davis, Syracuse,	do
Coat, vest and pantaloons, Thomas Cooke, jr., Albany,	Dip. and $3
Four crotchet collars, N. M. Beacham, jr., Skaneateles,	Diploma.
Horn of plenty, worsted work, Mrs. A. W. Bruce, Sullivan,	Dip. and Trans.
Lace manufactured by Sarah Ann Alderman,	Dip. and $2
Embroidered sofa pillow, Mrs. A. Pruyne, Oswego,	Trans.

FLOWERS.

Professional List.—Greatest variety, James Wilson, $5.

Dahlias—Greatest variety, Jas. Wilson, $5—Best 24, Wm. Newcomb, Pittstown, $3.

Roses—Greatest variety, Elwanger & Barry, Rochester, $5—Best 24, Jas. Wilson, $3.

Phloxes—Best ten varieties, Elwanger & Barry, $3—Best Seedling, Jas. Wilson, $2.

Verbenas—Greatest variety, Jas. Wilson, $3—Best 12, Elwanger & Barry, $2—Best Seedling, Jas. Wilson, $2.

Asters—Best collection, Wm. Newcomb, $3.

Pansies—Best collection, Elwanger & Barry, $3.

Amateur List.—Greatest variety, Mrs. E. T. T. Martin, Willow Brook, Silver Medal.

Dahlias—Greatest variety, M. Wells, Jamaica, Sil. Medal—Best 12, Mrs. W. Newcomb, $3.

Roses—Greatest variety, Mrs. E. B. Morgan, Aurora, Sil. Medal—Best 12, Mrs. David Thomas, Aurora, $3.

Phloxes—Best six, Mrs. E. T. T. Martin, $3.

Verbenas—Greatest variety, Mrs. E. T. T. Martin, $3—Best Seedling, Mrs. Prof. Jackson, Schenectady, $2—Best 12, Miss L. G. Whitney, Rochester, $2.

Asters—Best collection, Alphonso Le Coteleux, Buffalo, $3.

Pansies—Greatest variety, Dr. A. Thompson, Aurora, $3—Best 12, Dr. H. Wendell, Albany, $2.

General List, open to all competitors.—Best collection greenhouse plants, Elwanger & Barry, Silver Medal.

Best floral design—1. Mrs. C. B. Sedgwick, Syracuse, Sil. Medal—2. Mrs. W. Newcomb, $3.

Best floral ornament—1. Mrs. Prof. Jackson, Sil. Medal—2. Mrs. E. T. T. Martin, $3.

Best hand bouquet, flat—1. James Wilson, $3—2. Dr. Herman Wendell, $2.

Best hand bouquet, round—1. Jas. Wilson, $3—2. Mrs. White, $2.

Best basket bouquet, with handle, Dr. A. Thompson, $3.

For the most beautifully arranged basket of flowers, Dr. Herman Wendell, Diploma.

To Aurora Horticultural Society, for the best exhibition, Hovey's Col. Fruits.

FRUIT.

Apples—Greatest and best variety—1. Benj. Hodge, Buffalo, Diploma and Hovey's Colored Fruits—2. A. Bryant, Buffalo, $5.

Best 12 varieties table apples—1. B. Hodge, $5—2. A. Bryant, Buffalo, Trans. and $2.

Best 6 winter varieties—1. B. Hodge, $3—2. A. Bryant, Trans. and $2.

Pears—Greatest number of varieties of good pears—1. J. Morse, Cayuga Bridge, Dip. and Hovey's Colored Fruits—2. B. Hodge, $5—3. J. W. P. Allen, Oswego, Trans.

Best collection of first rate autumn pears—1. John Morse, Dip. and $5—2. J. W. P. Allen, Trans. and $2.

Best collection of newly introduced pears, Dr. Herman Wendell, Dip. and Hovey's Col'd Fruits.

Peaches—Best 12 varieties—1. John Morse, Dip. and $5—2. James M. Whitney, Rochester, $2.

Best 6 varieties, Elwanger & Barry, $3—2. H. G. Dickinson, Lyons, $2.

Best 12 peaches, B. R. Norton, Syracuse, (Crawford's Early,) $2—2. Abram Vail, Waterloo, Trans.

Plums—Best collection—1. 31 varieties, Dr. Herman Wendell, Dip. and $5—2. 50 varieties, Isaac Denniston, Albany, $3.

Best 6 varieties, Elwanger & Barry, $3—2. C. S. Wilson, Utica, $2

Best 12 plums,—1. R. Woolworth, Syracuse, $2—2. H. G. Dickinson, Trans.

Nectarines—Best and greatest number, J. C. Hastings, Clinton, $3.

Grapes—Best and most extensive variety native grapes, grown in open air—1. John C. Hastings, $5—2. D. Ayres, Amsterdam, $2.

Best 3 varieties grown under glass—1. W. R. Coppock, Buffalo, $5—2. John C. Hastings, $2.

Best dish of native grapes, (Isabella) Rufus Cossett, Trans.

Discretionary—Best grown and matured specimens, (Muscat and Black Hamburg,) — ———, Downing and Am. Fruit Culturist.

3 specimens of grapes, Joseph E. Bloomfield, Mexico, Am. Fruit Culturist.—Two bottles of white and red champagne wine, B. Poppe, Syracuse, Downing.—Specimen of port wine from native grapes Chas. A. Peabody, Columbus, Georgia, Diploma.

Melons—Best specimens water melons, H. N. Langworthy, Rochester, $3—Best specimens musk melons, to do., $3.

Quinces—Best 12 quinces. Elwanger & Barry, $3—2. Lewis Eaton, Buffalo, $2.

FOREIGN FRUITS.

Apples—Best exhibition—1. E. Harkness, Peoria, Illinois, Diploma and Trans.—2. James Dougall, Amherstburgh, C. W., American Fruit Culturist.

Pears—Best exhibition, F. R. Elliott, Cleveland, O., Dip. & Trans.—2. James Dougall, Amherstburgh, Am. Fruit Culturist.

Grapes—Best exhibition, Jas. Dougall, Dip. and Trans.

Discretionary—Dr. J. A. Kennicutt, Elm Grove, Illinois, for a fine exhibition of western apples, Downing's Fruits.

Mr. Overman, Canton, Illinois, for a fine display of apples, Downing's Fruits. Also, to the same, for an exhibition of pears, American Fruit Culturist.

F. R. Elliott, Cleveland, Ohio, fine display of new western apples, Am. Fruit Culturist.

J. Gallup, of Cleveland, Ohio, for fine exhibition of fruit, Downing's Fruits.

J. C. Holmes, Detroit, fine exhibition of apples, Fruit Culturist.

VEGETABLES.

Best 12 carrets, C. F. Crossman, Rochester,........	$3
Best 12 table beets, do do	$3
Best 12 onions, N. Culver, Arcadia,........	$3
Best 12 tomatoes, C. F. Crossman, ...	$3
Best 3 heads of cabbage, N. Culver,........	$3
Best 12 sweet potatoes, do	$3
Best 2 egg plants, C. F. Crossman, ...	$3
Best half-peck Lima beans, Jason W. Seward, Rochester,....	$3
Best bunch double parsley, C. F. Crossman,........	$3
Best 3 squashes, C. F. Crossman,........	$3
Largest pumpkin, H. N. Langworthy, Rochester, ...	$3
Best 12 ears of seed corn, N. Culver, ...	$3
Best seedling potato, H. Morrison, Montgomery,........	$3
Best and greatest variety of vegetables raised by exhibitor, C. F. Crossman,........	$5
Discretionary—Half peck Lima beans, J. P. Fogg, Rochester,..	$3
Three squashes, Lewis Eaton, Buffalo, ...	$2
do do C. F. Crossman, ...	$2
Large pumpkin, N. Culver,........	$2
Sweet corn, C. F. Crossman,........	$2
Table potatoes, Richard Cheney, Syracuse,........	$2
Seedling potatoes, Luman Shepherd, Skaneateles,........	$3

PAINTINGS, DRAWINGS AND DAGUERREOTYPES.

Animal painting in oil, by a young artist, B. F. Carpenter, Homer,........	Diploma.
Foreign artist, painting of a distinguished Short horn bull, by Mr. Henry Strafford, London,........	Diploma.
Pencillings, (The Playmates,) Miss Helen A. St. John, (13 years old,) Fabius, ...	do
Two Monocromatic paintings, and 2 pieces pencil drawings, by M. A. Hill, Canton, ...	Commended
Oil and water color paintings.—Two large monocromatic paintings, Mrs. J. S. Greenman, Syracuse,........	Diploma.
Three paintings in water colors on Ivory, Mrs. Anna S. Smith, Syracuse,........	do
Drawings in India ink for patent office, H. Searl, Rochester,	do
Specimens of penmanship, J. T. Carr, Ithaca,........	do

Daguerreotypes.—The committee divide the award for the best daguerreotypes between D. E. Gavit, Albany, and Evans & Powelson, Buffalo, and a diploma is awarded to each. Mr. McDonnell, Buffalo, presented one picture of rare excellence.

Case cameo likenesses, W. C. Mayhew, Buffalo, Diploma.

STOVES.

Best cooking stove for wood fire, Mathew Murphy, Syracuse. Silver Medal. Second best, "Phoenix Air Tight;" Seymour & Wood, Utica, $5.

Best cooking stove for coal, Forbes, Wright & Co., Syracuse, Silver Medal. Second best, Wm. Wheeler, Troy, $5.

Best parlor stove, "Chandelier," B. P. Learned, Albany, Silver Medal. Second best, Bailey, Wheeler & Co., Utica, $5.

Discretionary.—Flat iron heaters, Charles H. Tozer, Syracuse, Trans.

Self regulator for stoves, Foote & Owen, Seneca Falls, Trans.

Best lot of hollow ware, W. J. Noyes, Troy, Trans.

Morse's (Fire-Grate,) Air Distributor, J. A. Campbell, Buffalo, Trans.

Brass coffee pot, R. H. Kirk, Newport, Diploma.

MISCELLANEOUS.

From the long list of articles noticed by the committee, we select the following as being of most interest to the farmer:

For a pyramid of paper flowers, (elegantly wrought,) Miss Adeline Hayden, Albany, Medal.

Smith's hydraulic ram, with a new mode of regulating the discharge valve, Alpheus B. Smith, Meredith, Silver Medal.

Six iron cistern pumps, one well pump, and one force pump. These have a revolving motion to the spouts, Downs, Mynders & Co., Seneca Falls, Diploma.

A rotary fire engine pump of beautiful arrangement and manufacture, A. W. Cary, Brockport, Silver Medal.

Draining tiles, pipes and collars, manufactured by B. F. Whartenby, Seneca county, in a Tile Machine imported by John Delafield, Esq., of Seneca county, and exhibited by Mr. Delafield, Diploma and Silver Medal.

Five iron pumps, excellent articles, J. P. Cowing, Seneca Falls, Trans.

Dairy Steamer, a well made article, B. F. Greene, Little Falls, Trans.

Portable cider mill and press, Nathan Chapin, Syracuse, Diploma and Transactions.

Rotary steam engine, "Pease's patent," Geo. P. Strong, Rochester, Silver Medal.

Houghton's Bell Telegraph, for public houses, S. A. Hudson Syracuse, Diploma.

Sarcophagus or metallic burying cases, Fitch & Raynor, New-York, Silver Medal.

Machine for making cast iron water and gas pipe, by the centrifugal force of motion, &c., and a cast iron pipe, Thos. I. Lovegrove, Baltimore, Md., Silver Medal.

A finely finished bell, weighing 257 lbs., keyed on letter A, with the following inscription, "Presented to General Zachary Taylor, President of the United States, by Andrew Meneely, founder, West Troy, N. Y., 1849," Andrew Meneely, Silver Medal.

Sets of tools, chisels, augers, hammers, hay knives, &c., a beautiful display, D. R. Barton, Rochester, Silver Medal.

Machine for drilling rocks, M. P. Coons, Lansingburgh, Diploma and Medal.

156 Different patterns of pocket knives and cutlery, very fine, Waterville Manufacturing Company, Waterbury, Ct., Diploma and Silver Medal.

Washing and wringing machine, G. Goodell, Syracuse, Diploma.

Kit of coopers' tools, W. W. Bryan, Rochester, Silver Medal.

GRAIN, FLOUR AND WOOL.

Best sample of winter wheat, one barrel, (white Blue-stem,) Timothy Judson, Portland, $5. Second, H. Murray, Montgomery, $3.

Best sample oats, one barrel, E. R. Dix, Vernon, $5.

Best sample barley, one barrel, E. R. Dix, $5.

Best barrel of flour, Oviat and Stone, Rochester, Diploma. Second, Wm. W. Hanford, Honeoye Falls, Trans.

Best fleece fine wool, J. G. Strean, Washinging, Pa., Diploma.

John Holbert, Chemung, two butter firkins, Diploma and Trans.

☞ It is not improbable that inaccuracies have occurred in the names of persons in the foregoing list, which has been copied from entries in the Secretary's books. It is requested that all errors discovered be reported to the Secretary of the Society without delay, that they may be corrected before the final publication of the awards in the Transactions of the Society.

All information in relation to premiums may be obtained from the Secretary, who will give prompt attention to all inquiries.

B. P. JOHNSON, *Secretary.*

Twin Foals.—A pair of twin colts, three months old, well-shaped and of good size, were exhibited at the late State Fair, by **Peter G. Houghtaling**, of De Witt, Onondaga county.

The Veterinary Department.

Influenza in Horses.

EDS. CULTIVATOR—The disease I am about to consider under the above appellation, is better known among horsemen by that of "distemper." From the real nature and proper treatment of this affection not being properly understood, the number of horses which annually fall a sacrifice to its influence is almost beyond conception.

The hcaracter of this, like many other diseases, varies according to the season of the year, as well as the state and condition in which the animal is placed at the time of being attacked. It most frequently occurs when the weather is changeable, particularly in the spring and autumn months; and from being prevalent in some seasons more than in others, it has in consequence been considered to be a contagious disease; but the most probable cause appears to me to be sudden atmospheric changes, as from dry to wet, and from hot to cold. In its simplest or least complicated forms, it bears a resemblance to common cold (catarrh;) the mucous membrane of the "air passages," is its primary and principal seat, generally commencing in the chambers of the nose, and upper part of the throat, extending in some instances down the windpipe, and its ramifications the bronchial tubes; or it may go still further, and ultimately involve the whole substance of the lungs.

In some subjects its attack is very slight. The horse is first observed to be languid and dull; he refuses part or the whole of his feed of grain—occasionally coughs; he is incapable of undergoing any considerable exertion; signs of soreness of his throat are soon observed; the food cannot be swallowed as usual; the slightest compression of the throat makes the animal flinch and sets him coughing; the mouth is dry, and the membranes of the eye and nose are somewhat unusually red. In some severe cases, the soreness of the throat causes the animal to carry his neck stiff, with his nose projected; the food and water, when attempted to be swallowed, is forced back again through the nostrils; the glands about the throat are more or less swollen; the breathing is short, difficult and painful, and attended with a peculiar hoarse sound in the throat. In other instances the membrane lining the lungs, (bronchial,) receives the principal brunt of the disease; the horse now stands in his stall dull and listless, in one particular place; the breathing is short and quick, (but not deeply drawn;) the pulse is accelerated and weak; skin and legs rather warm than cold; membrane of the eye exhibits rather a *yellowish-red* cast; the discharge from the nose is also of a bilious hue.

It is not my intention in this article to attempt a description of all the characters that this disease occasionally assumes, but briefly to notice its most prominent features.

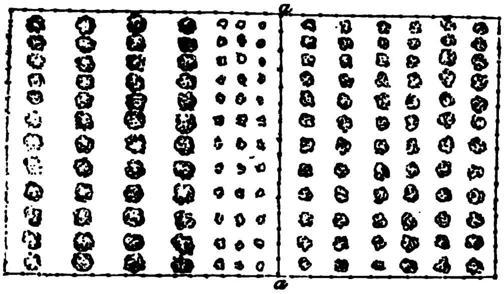
In determining the treatment of "influenza," regard must be paid to the seat and extent of the derangement constituting it, always bearing in mind that the tendency and certain issue of this disease is *debility*. Hence, in the generality of cases, the most cautious treatment is necessary; for if active measures are resorted to, such as large and repeated blood-letting, rowels, strong physic, &c., the horse becomes debilitated, his extremities (legs) enlarged and dropsical, and he either dies of "yellow water," (dropsy,) or remains for a long time in a low and weak state.

At the commencement of the disease, it is necessary to keep the animal in a large stall, without exercise; and in the summer let the temperature be kept as cool as possible, cautiously avoiding a direct current of air. The diet may consist of scalded bran and hay, with tepid water, in which a few drachms of nitrate of potash (nitre) is dissolved, always within his reach; or it may be sweetened with honey or molasses, providing the patient likes it. The horse should be well wisped or brushed, and clothed warmly, particularly when he feels cold and shivers. If the bowels are constipated, two ounces of cream of tartar may be given in the drink every morning, and should the excretions appear pent up, the hand oiled is to be introduced and the rectum emptied, and afterwards a clyster given composed of gruel, linseed tea, or a decoction of slippery elm.

When horses are of great value, I have suspended under their throat bags containing bran and linseed meal poultices, and renew them every two hours, keeping the animal at the same time comfortably clothed. Or the throat may be well fomented with water as hot as a man can bear his hand immersed in, and steaming his nose with the vapor arising from it; after which the glands about the upper part of the windpipe should be well rubbed with the following liniment: alcohol one pint, camphor one ounce, soft soap four ounces, spirit of hartshorn, (water of ammonia,) two ounces. Simple means, such as these, will, in the generality of cases, be followed by the happiest result; a complete restoration to health. ARTHUR S. COPEMAN. *Utica.*

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.



Arrangement of the Fruit Garden.

In setting out the different kinds of fruit trees, which when full grown vary much in size, cultivators are often puzzled to know how to arrange them economically, so that the larger may have room enough, and the smaller may not occupy too much space. The above figure represents a mode by which this difficulty has been very successfully removed, by planting the larger sorts in wider rows, and the smaller more nearly together. By this arrangement, the trees stand in rows both ways, and thus no hindrance is imposed to their easy cultivation by horses.

The Apricots, Plums, Nectarines, and other fruits liable to injury by the curculio, among which may also be included some of the earlier and more thin-skinned peaches and cherries, should be planted separately at one end of the fruit garden, and as soon as they commence bearing, a temporary low hurdle fence, *a a*, run across to separate them from the rest for the confinement of pigs, geese, &c. These animals, on the whole, are the most cheap and effectual remedy for the curculio, serving partly to frighten away the insects, and to destroy those which drop in the stung fruit. Other remedies may be added where necessary.

Those who are about commencing such a garden, cannot well take too much pains in the previous preparation of the ground. It should be very deeply plowed and very thoroughly enriched. If it is subsoiled first, it may be easily trench-plowed afterwards, the latter serving more effectually to intermix the manure to a full depth.

To cultivate the ground, and avoid barking the trees, fasten one horse before the other, using a very short whiffle-tree next the plow, and let a boy ride the forward horse. This arrangment will allow the plow to pass as near the roots as may be desired.

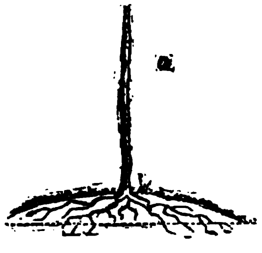
Autumn Work.

Every cultivator of fruit, who expects to keep up a supply, must occasionally renew his plantation. Of some kinds, and more especially peaches, it will often be found both easier and cheaper, to plant young trees, than to resuscitate old ones.

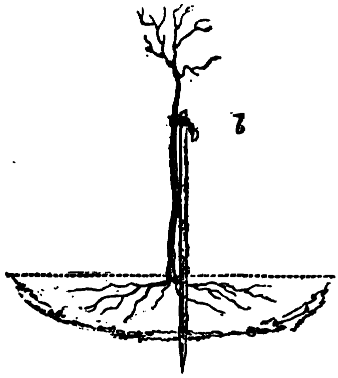
Hardy kinds of fruit trees, as the apple, if set in autumn, will get an earlier start the next season, than by removal in spring. But tender sorts, as the peach and apricot, are more safely transplanted after the danger of winter frost has passed. This danger, however, will scarcely exist if good soil is chosen, and proper care taken.

Low and wet soils, or ground which is clayey and holds water like a tub, or such soils as are liable to become flooded before freezing up, are dangerous for tender trees, newly set out by the usual mode. Where it becomes necessary from the force of circumstances to plant on such lands, the holes must be well drained, which may be effected by previously running a deep furrow along the line of the holes, and afterwards placing a small quantity of brush in this furrow before filling it, along which the water may soak away.

But on low and moist soils, it has been found decidedly advantageous to set the trees without digging any holes, as represented in the annexed figure. (*a*.) The tree is set directly upon the rich mellow surface, (indicated by the dotted line,) and the earth thrown upon the roots so as thoroughly to cover them, and form a very broad and flat mound of earth. This not only gives the roots a deeper soil, but it is nearly impossible for the water to accumulate among them. By throwing the furrows occasionally towards the row, the rising surface will be maintained, and a furrow left between for drainage.



Trees of moderate size, with good broad roots, with one years' shoots properly shortened back, say about one-half or two-thirds of each, will not often need staking; very rarely, if a mound of earth is banked up a foot high round the trunk, till the tree is in leaf. But with large heads and badly cut roots, staking cannot be easily avoided. Where this is the case, a very convenient way is to drive the stake into the bottom of the hole before the earth is thrown in, as in the accompanying figure, (*b*) and subsequently binding the tree with straw to the stake, so as to preclude the possibility of chafing.



There are several other operations which the fruit cultivator must not forget before the winter sets in. Tender trees may be materially protected in some instances by a circle of manure about their stems, the soakings of which will only enrich the soil, till it is removed when warm weather approaches. But one of the best possible means of protection is a *dry soil and subsoil* for all such trees, without which all artificial modes of covering will be of but doubtful efficacy.

Young trees in localities unfavorable to rich cultivation, and which may not be sufficiently vigorous in growth, may be given new vigor by covering the soil several feet around them with yard manure, and sprinkling this with half an inch of ashes, spading the whole under early in spring.

A fresh mound of earth should be banked up round the stems of such trees as may be in the least danger of injury from mice, which will result in their perfect exclusion.

A top-dressing of manure on strawberry beds will protect them from the winter, and enrich, by soaking, the soil near the surface.

Tender raspberries, &c., are very neatly and effectually protected by a covering of evergreen boughs, of moderate thickness, shutting out the sun's rays from the frozen stems being very essential.

The Everbearing Raspberry.

This celebrated sort has excited many inquiries, and has perhaps been overpraised. The common American Black raspberry or "Black-cap," is a valuable kind, and especially adapted to some of the lighter soils, where the Antwerps succeed but imperfectly. The superiority of the Everbearing over this, is pointed out in the following extract of a letter from a very experienced cultivator:—"It is only a *variety* of our wild black raspberry, which, *in very rich ground*, sends up suckers through summer and autumn, flowering and fruiting the same season,—exactly as the last year's *stems* produce bearing *shoots* on the common kind. The quantity of fruit, however, must be very limited; and coming at a time when our finest kinds are in season, I consider it of little value. Other persons, however, may think differently. The everbearing Alpine strawberry, I think, is precisely a parallel case, for I presume this strawberry is not a new species."

Office of Leaves Illustrated.—During the last hot, dry weather, the leaves of one rose bush dried up, and I was apprehensive I should lose the plant,—the only one of the kind I had. The thought struck me that each leaf was pumping out the moisture, and therefore I cut off every one. The result was, the twigs ceased to wither, and the buds are now swelling for a new start. Over deep, loose subsoils, such disasters may rarely occur. Fearing it might not live, however, I took the additional precaution to set buds from it. David Thomas. 8 mo. 12, 1849.

American Congress of Fruit Growers.

Pursuant to adjournment, the members of the American congress of Fruit Growers, together with additional delegates from Societies not represented last year, met at Castle Garden in New-York on the 2nd inst. There was a large number of gentlemen present from various parts of the United States, and also, very fine collections of Fruits, full lists of which will appear in the published proceedings, which are to be issued in pamphlet form. Marshall P. Wilder, the President of the Congress, took the chair, as did also the Vice Presidents and Secretaries, their appropriate stations. A resolution was passed inviting the President and Vice Presidents of the North Am. Pom. Convention who were present, to take seats on the rostrum, which they accordingly did. At an early hour of the first days' session, Mr. A. J. Downing addressed the Congress, urging upon its members the propriety and necessity of harmony among pomologists, and congratulating those present upon the prospect of such harmony, consequent upon the action of the North American Pomological convention, which recently terminated its session at Syracuse, by which Convention a committee of conference had been appointed, to confer with this Congress, upon matters relating to merging the two associations into one organization for future operations, which committee he understood were present. He closed his remarks by moving a resolution that the President of the Congress appoint a committee to confer with the committee of the other association, which was unanimously adopted. The President named Mr. Downing, Dr. W. D. Brinckle, Mr. McIntosh, Professor Olmsted, and Mr. Walker; subsequently the President was added to the committee on a suggestion of Dr. Wendell that the President of the other organization had been added to its committee. After Mr. Downing had closed his remarks, and the committee had been appointed, Dr. Herman Wendell rose, and remarked that, as chairman of the committee of the North American Pomological Convention, who had been appointed to confer with this Congress, he begged leave to coincide fully in all the remarks of Mr. Downing in relation to the necessity of harmony and kind feeling among Pomologists; and he could not but hope, from the character of the committee which had been chosen, to confer with the one of which he was a member, that such would be the effect of the Conference of the committees.

Dr. Wendell added that the committee who were appointed, and who were now present, to confer with the committee just appointed by this Congress, were Dr. J. A. Kennicott, Prof. J. J. Mapes, F. R. Elliott, Col. Benjamin Hodge, Chas. Downing and himself.

The convention then adjourned, in order that the committees might confer together. At its re-assemblage, Col. Wilder remarked that the joint committees had met and chosen him its chairman, and that they had unanimously instructed him to report, as the result of their deliberations:—

1st. That the two associations shall hereafter be merged into one organization, under the title of the American Pomological Congress.

2nd. That the next meeting under the above title, be held in the city of Cincinnati, during the autumn of 1850,— that the precise time be left for the President of the Ohio Board of Agriculture, and the President of this Congress to determine, and that circulars be issued inviting all kindred associations and societies, as well as individuals interested, to attend its meeting.

3d. That the meetings after the next one be held biennially, and that this Congress recommend that the meeting for 1852, be held in Philadelphia.

The report was unanimously adopted.

Reports from several State committees were then handed in and referred to the appropriate committee.

Mr. Downing, chairman of the General Fruit Committee, reported a list of varieties to be recommended for general cultivation; and also a list of varieties to be rejected, which induced an interesting discussion, which consumed the remainder of the day, and the greatest part of the succeeding one, and which was participated in by many of those present. This discussion will be given at length in the published proceedings, which will be issued shortly.

Mr. Downing also introduced a Constitution and By-Laws for the American Pomological Congress. The Congress adjourned sine die on the afternoon of the second day, after an interesting, harmonious ond useful session,—the members congratulating themselves that all difficulties heretofore existing had been so amicably terminated, and separating with great good feeling.

Pear Tree and Fire Blight.

I have within the last few years lost nearly all my most valuable pear trees by the disease called "fire-blight"—commencing at the extremities, and dying downwards. Viewing the disease very much like hydrophobia, incurable, I have felt at liberty to try all kinds of experiments, and from present indications, I am satisfied that I have discovered a remedy.

I have a pear tree in my garden now sending out new shoots from every branch through a bark as black and dead as it can well be. The tree seemed dead in every limb; when I first discovered the leaves changing and fruit withering, I at once applied what had appeared successful the year previous. I say "*appeared,*" because other remedies had been used, and it was uncertain which was the real specific. The application was as follows: I reremoved the earth about the roots near the body as deep as I could conveniently, making an open tunnel around the tree, into which I poured 4 quarts of boiling water; as soon as the water had disappeared, I emptied a quart oil-can of whale oil upon the exposed and steaming roots, and also upon the body of the tree. The next day I syringed the whole tree with oil-soap water, very strong. Shortly after, I discovered a new bark forming under the black, dead bark outside, and now the tree is really a curiosity.

My impression is that the real specific is the whale oil, but as I had used the boiling water in both experiments, it should be mentioned as a concomitant, and it may be found essential to a cure. The tree upon which I tried the same remedy last year was not as much diseased, and having cut off the black part, I had no opportunity to discover the effect upon the diseased limbs. The tree revived at once, and has since evinced no symptoms of disease. J. W. F. *Hudson, July* 19.

Stereotyped Errors.

Extract from the letter of a correspondent:—"There is an article going the rounds, taken from the American Agriculturist, that contains a number of fictions, such as that the *peach* was a poisonous almond, (when properly it don't belong to the same genus,) and that it was introduced into Persia to poison their arrows with its flesh! That the nectarine and apricot are natural

" hybridation " between the peach and plum; (the apricot is a distinct *genus*, containing at least two species;) that cultivation has given to the cherry a separate stem for each berry, thus improving its quality! That cabbage is derived from the common sea-kale !"

Varieties of Fruit.

Eds. Cultivator—On the 246th page, under the head of " Horticultural Items," you copy from the *Southern Cultivator* the remarks of a correspondent concerning fruits. This gentleman says in so many words, that out of all the choicest varieties imported from France, England, and the North, " there is not one tree that has borne fruit equal in quantity or quality to our common native kinds." Just there I am at issue with any man, North, South, East or West. I have an opinion diametrically opposite. And lest this correspondent may deter our friends " in the South and elsewhere about" our country from making purchases of improved fruits, I beg to say, I think he is either very fortunate in having very superior " common native kinds," or very unfortunate in only seeing or hearing of very inferior " common" foreign kinds.

To the end that your readers may know what opportunity I have had to be a judge, permit me to say, I have been in the South over 40 years, born in Columbia, S. C., where N. Herbmont and J. S. Guignard, Esqrs., both lived, (both were prominent horticulturists 30 years ago;) I lived in Philadelphia two years, and have been in Mississippi 19 years.

My father had a fine orchard of apples, peaches and plums 30 years ago, and was intimate with the two gentlemen named. I began to purchase foreign trees in 1833, and to grow seedlings a year or more prior, and brought peach stones from the New Jersey orchards home with me in 1829. I have grown, fruited, and cut down not short of 1000 seedling peach trees. I have seen and eaten the peach, North, South and West. I have had ripen this year not less than 80 to 100 varieties of the peach, and taken notes of 70 varieties. I have had fruit here, not less than 20 varieties of the apple this year. Will this give me any right to give an opinion? But further—in my section of this State, Mr. Lambert—in Vicksburg—has an orchard, which he markets the fruit of, and though surrounded by thousands of peach trees, no seedling fruit can sell by side of his own at half price.

In my orchard there are about 2000 peach trees, numbering about 140 varieties. Some are *seedlings* of Mississippi, but generally *these* are varieties that ripen *after* the foreign are gone; some early varieties are excellent, which are natives, but they are uncommon, and are not, one out of ten thousand trees that ripen, say, in July. I allude particularly to Elmira and Magruder, the only two that I have yet seen that will at all compare with early Tillotson or early York *true;* and no one who has tas'ed fruits here, at Lambert's or Hatch's, will pretend to bring in comparison the " common" or uncommon " native varieties."

Readers of agricultural papers pretty generally know my name, and know that I am always for my own, my native land, but in this matter I cannot advocate the native fruit against an absolute demonstration. Let me ask, what are the foreign varieties of peaches? They were seedlings, but they are selections from every land, North, South, East and West, across the water, and from both continents, and to get these 140 varieties, there were probably millions discarded as worthless, and almost a century in making the selection. Shall we at a dash of the pen, discard the judgment and the experience of our forefathers?

A Michigan man says, we have the clime of the peach; a Philadelphian insists that he has the very same; a South Carolinian finds nothing at all equal to his seedlings, a distinguished jurist of my own land, says a little Dr. of my name is doing incalculable injury by advising the *improved*, (I say the selected) fruits—and I say France and England, and New-York, and Massachusetts, or even Mississippi, have given fruits worthy of culture.

There is no possible way of proving these matters. I heard of a woman once who fancied to kiss a cow; this was all *taste*, and we cannot combat that.

This I will do. If any man from Michigan to Florida, from Maine to California, will furnish me with 20 peach trees, ripening from June 10 to Sept. 1, equal to Early York, Crawford's Early Melocoton, Royal George, Smooth Leaf, Bellegarde, Oldmixon Cling, Druid Hill, Smooth late, &c., I will give undoubted security that I will give $100 for the 20 trees, so soon as a jury of 12 will pronounce them only equal to the above, and of that No. 1 class of peaches which ripen in succession. I do not this as a banter. I have no desire this way. But if I could get such trees, I could sell of young trees $100 worth in a year, and then be known as the individual who did so much for my country.

Now these trees may be in the South, and natives too, but to collect them would cost more time and money than they are worth. I have been collecting for five years, have begged for the best natives, and but five of the very best do I find worth culture.

I want peaches from July 1st to Nov. 1st. Would I act wisely to collect seed from every direction, plant and cultivate probably 1000 trees to get 20 varieties? Or had I not better pay $10 for the 20 trees that are certified to be ripening in succession and to be No. 1?

I know there are choice seedlings, for I have introduced two myself. I know the Lemon Cling, Heath, Columbia, and some others will produce very similar and often excellent peaches, but this only makes the rule stronger.

Where have the thousand and one varieties of the peach come from, if seed from good trees will produce good fruit?

Nobody would plant seed from a diminutive half ripe peach, if they could get the best, and of course would never have the mean.

Go into any seedling orchard in America and get 20—aye, 10, or 5 varieties of peaches equal to Crawford's Early or Late, and I will go into the nearest and show you three-fourths not worth culture.

I have sold trees to gentlemen born in the South, who were sixty years of age. Are they so foolish as to buy of me inferior fruit, after seeing the fruit?

I have sold fruit trees, though I am a cotton-planter. And I dare think I have the largest variety of fruits owned by any amateur horticulturist—a private person—in these States. M. W. Philips. *Edwards, Miss., August* 31, 1849.

Haskell Sweet Apple.

In the last No. of *The Cultivator*, under the Horticultural Department, I see, in answer to inquires respecting the best sweet apples, you name the Haskell Sweet, for the fall.

I should be pleased to know from you, if this is the same apple described by Cole, in his recent fruit book. If it is, it will present the singular fact of an apple of high merit disseminated at a distance, and yet here in Essex county hardly known at all beyond the town (Ipswich) where it originated. It would also confirm my own opinion of its superior qualities.

I know not why Mr. Cole calls this the Sassafras apple. The original stock is now standing on a farm once owned by a Dea. Haskell, whence its name. Allen W. Dodge. *Hamilton, Mass., August* 24, 1849.

[This is the same as Cole's Sassafras apple—it has been cultivated by Robert Manning, of Salem, who thinks it the best autumn *sweet* apple—it has also proved fine at Macedon, in western New-York. Ed.]

The Chinese Chrysanthemum.

The chief attraction of this plant is the lateness of its period of flowering. In mild autumns, succeeding the dahlia, it continues flowering in the warm sheltered border, till finally checked by the severe frosts of approaching winter. The roots, with us, have endured the severest winters unprotected. Treated as a green-house plant, and kept in neat compact bushes, instead of the long, slender, bare stems, too often seen, it forms a fine blooming ornament for the early part of winter. The following remarks on the mode of treating this plant, adopted by the Chinese, who are very successful in its culture, are copied from a correspondent (Robert Fortune) of the London *Gardeners' Chronicle* :—

87—THE CHRYSANTHEMUM.

"The method of cultivating the Chrysanthemum in China is as follows. Cuttings are struck every year from the young shoots, in the same manner as we do in England. When they are rooted, they are potted off at once into the pots in which they are to grow and bloom; that is, they are grown upon what would be called by our gardeners "the one-shift system."

"The soil used in potting is of a very rich description. About Canton it is generally obtained, in the first instance, from the bottom of lakes or ponds, where the Nelumbeum or Water-Lily grows. It is then laid up to dry and pulverise for some months, when it is mixed with old night-soil taken from the manure tanks found in every garden. A heap of this kind, after being laid up for some time and frequently turned over, is in a fit state for potting the Chrysanthenum. Manure water, taken also from the tank already noticed, is liberally supplied during the growing season, and the effects are visable in the luxuriant dark green leaves which cover the plants.

"In forming the plants into nice compact bushes, which, with due defference to Chinese taste, I think much prettier than animals and "seven-storied pagodas," their system is as follows: The plants are trained each with a single stem; this is forced to send out numerous laterals near its base, and these are tied down in a neat and regular manner with strings of silk thread. By having the plants clothed with branches in this way, and by keeping the leaves in a green and healthy state, the specimens never have that bare and broom-headed appearance which they often present in England when they are taken into the green-house in winter.

"About Shanghae and Ningpo the Chrysanthemum is still better managed than it is near Canton; but the success which attends it may also be attributed, partly at least, to the more favorable nature of the climate, the plant being indigenous to the central or more northern parts of the empire. The system of cultivation is nearly the same; the main points attended to being those which have been noticed, namely, choosing a rich soil, planting at once into large pots; training to a single stem, and inducing it to send out numerous laterals, and giving liberal supplies of manure water during the growing season. The Chinese are fond of having very large blooms, and, in order to obtain these, they generally pick off all the small flower-buds.

"In China, as in England, the Chrysanthemum flowers during the winter months. When in bloom it is in great request among the people, and is used in the decoration of court-yards, halls and temples. It is everybody's plant, and blooms alike in the garden of the lowly Chinese cottager as in that of the blue-buttoned mandarin.

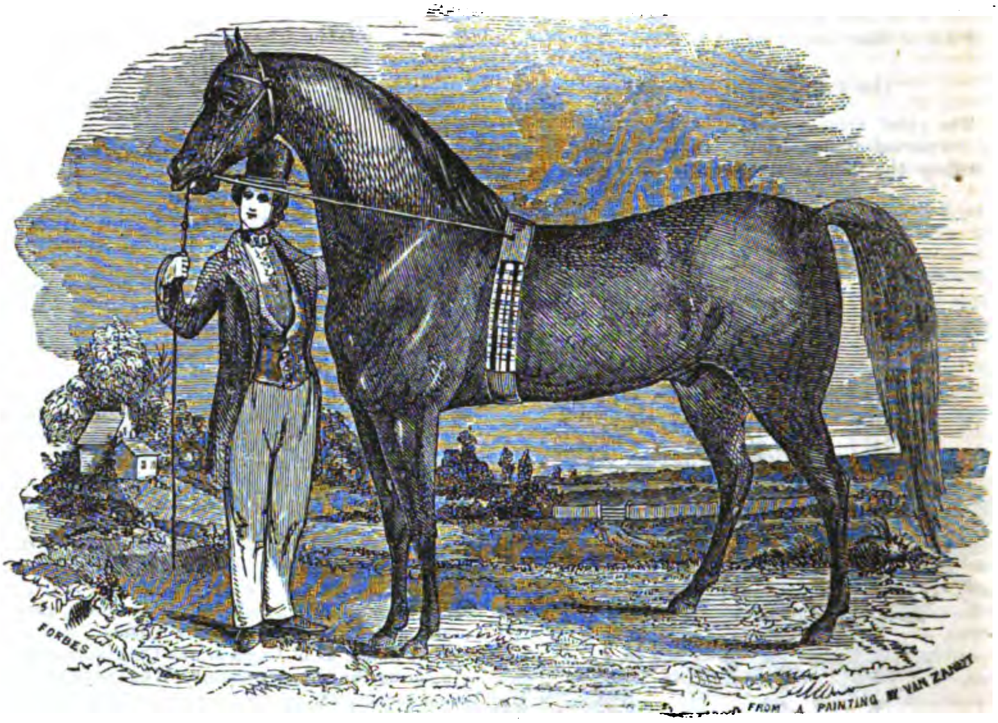
"Although we are indebted to China for the parents of those varieties of Chrysanthemums which enliven our gardens during the dull months of winter, yet, strange to say, the progeny is more numerous in Europe than in China itself. Some of those beautiful kinds raised by Mr. Salter in France would be much admired even by the Chinese florist. It is a curious fact, however, that many of those kinds, such as formosum and lucidum, which were originally raised from seed in Europe, are also met with in the north of China."

Watering Newly Transplanted Trees.

In very dry seasons, like the present,—or, as it was a few weeks ago,—it is often important to water newly transplanted trees; but the common mode is very objectionable. When the water is poured on the surface, the soil is apt to crack, and let the moisture below escape through the openings, so that its utility may often be very doubtful. Latterly I have applied the water differently. Dig a hole near the tree so as not to disturb its roots, and pour in a pailful. Then draw in the loose earth till the hole is filled, and covered up completely, so that nothing *wet* is visible; and no cracks will ever appear. A tree treated in this manner will not need watering again for a week.

Ligatures for Budding.—All the budding that I have done of late, has been bandaged with the leaves of the *English bulbous Iris*, which are sufficiently strong for this purpose, if gathered and kept from the wet as soon as vegetation ceases. They are even good yet without such precaution, though the ends indicate the approach of decay. Each leaf will make two bandages. David Thomas. 8mo. 24, 1849.

☞ This will be found one of the best months in the year to obtain subscribers to "The Cultivator;" and we trust our Agents will give as much attention to the matter as possible.


FORBES
FROM A PAINTING BY VAN ZANDT

Blood Horse "Alexander."

This fine animal is owned by Mr. E. H. Ireland, of Albany. He received the first premium in the class of blood horses at the State Fair at Buffalo, in 1848. He is a horse of commanding appearance, and the committee who awarded him the premium remark—"He is a beautiful blood bay, fine bone, high carriage, and beautiful action. He is eight years old, and a superior horse for all purposes." He has stood in this city for several years, and his patronage has been extensive.

The Farmer's Note-Book.

Trial of Plows in Seneca County.

To the President and Members of the Seneca County Agricultural Society:—

Gentlemen—When we received the notice of our appointment to act as judges at the trial of plows in Seneca County, we felt in common with our farming community, the importance of the movement, and the benefit to arise from a careful, judicious accomplishment of the purpose.

As practical farmers, accustomed to the plow and its use, we feel justified in presenting a few remarks in connection with the matter before us, for the consideration of the farmer, and the mechanics, who are disposed to aid us in the proper arrangement of the implements we need in our vocation, and more especially the indispensable and important implement, the Plow.

We think it has been long evident that caprice and accidental circumstances have given rise to a large catalogue of plows, which, upon trial, have disappointed the hopes and wasted the means of the purchaser; of this class of plows, few, perhaps, have been constructed by makers having a knowledge of the *use* of the implement, and but little of the skill or science necessary for the construction of a *good* plow.

There seems to be another error also prevalent among plow makers, too often adopted by farmers, boding evil to our agricultural success, or at least to a thorough and proper tillage of the soil; we allude to the frequent attempts to produce plows which shall, by turning broad furrows, work over two acres per day, gaining time at the expense of the necessary breaking up and essential pulverising of the soil. Thus, farmers are tempted with plows to turn furrow slices of 14 to 16 inches in width, while the depth rarely exceeds 5½ inches; we will not deny that circumstances *may* exist where a broad furrow of twelve inches and more in width *may* be useful; but as a general principle, greater *depth* with pulverisation, should be the main object of the plow maker, the second effort being to overcome resistance with the least power.

We feel strong in the opinion, that large masses of soil, turned over in furrows of fourteen inches wide by six inches deep, must require a large outlay of subsequent labor to render the soil friable and in fit condition to receive manure in a well mixed state; neither will the land so treated be in a state to afford thorough nourishment to the seed deposited from the manures intended for it. The gain of time therefore, in rapid plowing by broad furrows, may be and oft times is an expensive system.

Another error in the manufacture of plows, from which, as practical farmers, we are called upon to suffer inconvenience is, the imperfect line of draft presented to our teams, not only because this line is not preserved at right angles with the shoulders of our horses, but also because of the arrangement of the beam as attached to the iron frame of the plow body. In this latter arrangement much difficulty appears to exist, and fancy has too much sway; the obliquity of the beam to the line of the land side, may be necessary in some degree to produce a direct line of draft from the true point of resistance, but as practical men we have reason to object to the too frequent need of shifting our guide bolts, and the use of other expedients to compensate the erroneous line of draft adopted by the makers. We feel well assured that our agricultural mechanics are abundantly skillful, and possess sufficient science to correct this inconvenience when brought to their notice.

When we consider the object or intent of the plow, we arrive at the fact that it is to perform in the hands of the farmer the same operation, and to produce the same effects, as the *spade* in the hands of the gardener; that is, to turn over and thoroughly to break up the soil. Now the man and his spade acting together is a most complex and perfect tool; but the time is yet to come when a *simple* machine shall be produced to accomplish with *equal excellence* the same results as the man and spade. We may not doubt however, from the vast improvement of late years, that such a machine will in time be constructed; the talent and science of our agricultural mechanics fully justify such expectations, and the rapidly increasing attention of farmers to the study of their vocation, will act as a stimulus to the inventor and a check upon visionary attempts.

With these prefatory remarks, we now present a report of facts connected with the trial of plows, facts which offer to every man of thought and observation much matter for reflection.

On the morning of Thursday, the 30th August, 1849, we reached the grounds selected for the trial of plows. The field presented a generally uniform appearance, gently sloping from the east to west; the soil was a clay loam, rather tenacious, as is most of the wheat land of the fertile county of Seneca; the sod was of timothy with a mixture of clover, and had not been plowed for several years. It should here be mentioned and remembered that since the month of May last, but little rain had fallen in this section of country, which was made manifest by reference to a meteorological table, as well as by the condition of the soil. Nevertheless, as the soil was uniform in its nature, so the resistance offered was relatively the same to each plow, and the trial was alike to all, and under like circumstances.

A stationary power had been well placed, midway between the eastern and western extremes of a plat of ground 150 feet long; a traveller or guide was prepared to bear and direct the rope, in order that each plow might be directed with precision.

Furrows had been previously opened six inches in depth. The plows were entered on the secretary's books in numerical order, and called to the trial in the same order. A substantial dynamometer was placed in our hands with a certificate from the proper officer that the same had been tested and proved by the State standard, and was correct, indicating power as high as one thousand pounds.

An extent of ground was carefully surveyed, and marked into spaces of 30 by 300 feet, for the purpose of exhibiting the manner in which each plow could perform the work required.

With these and other arrangements, our duties were comparatively easy, and as no haste or hurry was permitted, we continued our labor through two successive days, strengthened by the hope and belief that we were entering upon a system which, if continued from year to year, would in due time work a large and positive benefit.

The following table gives a full and particular statement of the trials, classifying the implements in order, from the lesser to the greater power required to overcome the resistance offered.

By Stationary Power.

Depth of forrow, 6 *inches—Width of furrow*, 12 *inches*.

	Pounds.
1. Burrall's wheel Plow, No. 2,	290
2. Burrall's Wheel Plow, No. 3,	295
3. Lamport Iron Beam Plow from Ovid,	340
4. Burrall's Wheel Plow, No. 4,	345
5. Penn Yan Plow,	355
6. Burrall's Wheel Plow, No. 5,	356
7. Buckeye Iron Beam,	372
8. Crane Plow, with cutter,	415
9. Burrall's Landside Plow,	427
10. Dundee Plow,	441
11. Burrall's Landside, No. 5,	485
12. Crane Plow, with coulter,	493

By Horse Power.

Depth of furrow, 7 *inches—Width of furrow* 13 *inches*.

	Pounds
1. Burrall's Wheel Plow, No. 3,	489
2. Penn Yan Plow,	493
3. Burrall's Wheel Plow, No. 5,	511
4. Burrall's Wheel Plow, No. 4,	519
5. Lamport Iron Beam,	520
6. Dundee Plow,	520½
7. Burrall's Landside, No. 2,	524
8. Crane Plow,	533
9. Burrall's Landside, No. 5,	673

The trial by horses having been made on the second day, several owners of Plows entered, did not appear in time.

The plowing performed by the several implements was good and uniform, evidencing much skill on the part of the plowmen. Understanding that the chief object of the trial was to ascertain the true and reliable estimate of the *power* necessary for good work, we do not deem it necessary to particularise the work of any one plow; all was good, and the facts set forth in the above table will enable every man to draw right conclusions and safe estimates.

Among the facts presented to our notice, were two frames of the wheel plow, which had been used for several years, they were worn through the mould board, and the wheel had yielded on its margin, being the substitute for a landside; on examination, the journals or points of the axle of the wheels, were sound and perfect.

Having witnessed the excitement among men of science, as well as among the large assemblage of practical farmers convened on this occasion, we respectfully urge upon the farmers of this State, and upon agricultural mechanics, frequent meetings and interviews upon the plan of, and with similar objects to this meeting in Seneca county; the true interests of both will be substantially promoted, and science will be more kindly courted to deepen our furrows, to pulverise our soils, and thus add to our general prosperity.

Saturday, September 1, 1849.

B. B. Kirtland, Rensselaer Co.,
Elias Cost, Oaks Corners, Ontario Co.
John Mallory, Penn Yan, Yates Co.
Judges of the trial of Plows.

To John Delafield, Esq., President
of the Seneca County Agricultural Society.

Litigation.

In the last paragraph of my article on Litigation, I am made to say "In this respect we are *not* far behind the Danish colonies in the south." I intended to say that *we are* far behind them. A gentleman who spent some months in the island of St. Croix, and who paid particular attention to this subject, informed me that nine suits out of ten are settled before "The Reconciling Commission."

The same gentleman has placed in my hands, a copy of the "Ordinance respecting the Reconciling Institution," issued by the King of Denmark at Copenhagen, 17th December, 1798, which he received from one of the Judges of that Island. Perhaps I may notice it hereafter. AN OBSERVER.

Oneida Agricultural Society.

We had the pleasure of attending the Show and Fair of the Oneida County Agricultural Society, held at Hampton Village on the 26th and 27th of September last. This was the ninth annual exhibition of the society, and in the opinion of those who have attended on former occasions, it afforded evidence of progress in reference to those objects to which the association is devoted. The writer was previously unacquainted with the agricultural products of the county, except from such specimens as have been presented at our various State Fairs, and had not, therefore, the means of comparing the present with former displays.

As to the live-stock exhibited on this occasion, the cattle and horses were more numerous than at most county exhibitions which we have attended. In respect to quality, the general average of the cattle was hardly as good as we had expected to find. We say it in no captious spirit, but with limited exceptions, the cattle possessed but few of the characteristics indicative of proper breeding; that is, they had not the uniformity of points which showed that the breeders had any distinct or definite objects in view—their occasional good qualities appearing to be rather the result of accident, than a well defined system. We noticed five or six full blood Devons, (rather too small in size for the present standard of that breed,) and a couple of fine short-horn heifers; most of the stock appearing to be a mixture of various breeds with no particular traits of either.

There were many working oxen and steers. Among them we noticed the fine cattle of S. H. Church, which received a silver medal at the late State Show, the oxen of John Bryden, which took the second premium, and the three-year-olds of H. H. Eastman, which took the first premium for steers on the same occasion. Several yoke of the oxen performed well on a loaded cart.

There were but few good swine. Of sheep there were good specimens of Saxons, Merinos, and several pens of mixed blood English sheep. Of poultry, there was a fair show. Mr. Redmond, of Utica, had various kinds of fowls, Dorkings, Javas, Games, &c.; Bremen geese, and several varieties of ducks.

The show of implements was quite large—especially of the various kinds of improved plows, cultivators, straw-cutters, &c. The principal manufactured articles, dairy products, fruits, vegetables, &c., were exhibited in a large tent, forming a collection highly creditable both in extent and quality.

The plowing match was an interesting display of approved plows and of the comparative skill of plowmen. We think there were seventeen competitors. The soil was very firm, being somewhat stony and gravelly, and covered with a tough and close sward, which rendered it difficult to be plowed well, to the depth required—seven inches. It was, however, a very suitable place for such a trial, forming a better test of the capacity of plows for working in a tenacious soil, than is usually obtained on similar occasions. The work was generally well done. In a few instances the furrows were too wide, and consequently laid too flat and heavy. Among the plows used, we noticed the Scotch plows made by Mr. Auld, of New-Hartford, others made by Messrs. Milner of Whitestown, Wilson of Vernon, Pratt of Syracuse, Delano of Mottville, Brainard & Wheeler of Rome, Ruggles, Nourse & Mason of Worcester, Mass., and Smith's Michigan sub-soil plow, offered by Newel French. The latter consists of two plows set one before the other, in the same beam. The forward one skims off two or three inches of the sward, and the hinder one goes four or five inches deeper, raising the lower soil and throwing it completely over the sward. What would be the usual working or comparative advantage of this implement for soils in general we are not prepared to say; but on this occasion it left the soil in fine condition for a crop. It was drawn by four horses, and thoroughly stirred and reversed the soil to the depth of nine or ten inches. It required but one man to hold.

The address to the Society was delivered by its President, Henry Rhodes, Esq. It was a sensible, straightforward document, well calculated to urge on the people of the county in the various enterprises which they have already so well begun.

The number of people in attendance on this occasion was not less than eight thousand, not a small proportion of which were ladies; and the spirit of ambition for improvement in most departments was strikingly manifest among all classes.

Farmers' Wives and Daughters.

EDS. CULTIVATOR—I have observed many articles in agricultural and other papers, in reference to farmers' wives in New-England, which I am sorry to see have not met with a very cordial acceptance by that class for whom the authors of these articles have poured forth their sympathies. Some persons who have never entered a farmer's house, and who have not the least conception of the manner in which the wife or daughters spend their time, give such melancholy descriptions of their sufferings, and draw such fabulous pictures of their employment, that it would almost induce the slave at the south to forget the pain of his bleeding back, and the hardships of his daily toil, in sympathy for the degraded and much abused wife of the New England farmer. Doubtless all of that much oppressed class, in order to mitigate whose sufferings these articles are written, feel very thankful to those, who from gallantry, or from the kindness of their hearts, have enlisted in their behalf. But we would like to make one suggestion for their benefit and ours, that they would lay aside their pen until they had informed themselves upon the subject upon which they would write, and we trust they will find their sympathy uncalled for.

There is another class whose opinion in reference to farmer's wives and daughters is scarcely less erroneous, though they have had a personal knowledge of the extent and nature of their employments. Their false ideas arise from the incorrect standard by which they estimate a woman's true worth. There are many who consider *that* labor the hardest to be endured, and that servitude the most severe which affects in the least, the complexion of their delicate hands. It is very natural for them to breath forth their sentimental lamentations for the black-handed objects of their pity, only showing a lack of judgment in observation, and necessarily ridiculous fallacies in conclusions. It is persons of this class, I imagine, who have penned these articles to which we have alluded, and an article of this class, from the *Springfield Republican*, in your last number, is, in my humble opinion, a ridiculous specimen of that most ridiculous class of pieces. That writer complains that the life of the farmer's wife is "nothing but mend and botch, cook and bake," &c., &c. 'T is true, the farmer's wife and daughters *do labor;* but is it not as honorable for them to do that which promotes their health and happiness, as to sit in their parlors, spending their time in embroidery, reading foolish novels, or thumming the piano to the tune of "Susannah, don't you cry," and other popular negro melodies, while a servant girl in the kitchen performs their duties for them. It is said, too, that New-England farmers kill their wives with hard work. This assertion is too notoriously false to need refutation; and even if the farmers were such brutes, the women of New England are too independent to submit to such treatment.

Where do we look for the healthiest women? Is it among that class who never see the sun rise, or the dew sparkling in his early rays? Or is it among those who are compelled by their avocations to rise early, and to inhale the fresh and invigorating morning air? It is an undoubted fact that farmer's wives and daughters, as a class, are the most healthy, are capable of enduring the greatest fatigue, and consequently live to a greater age.

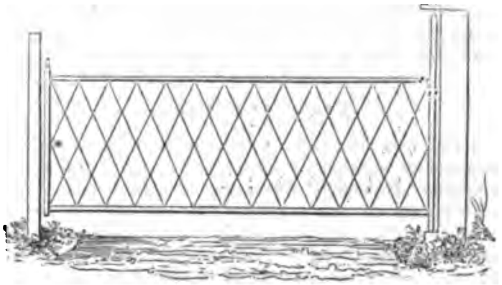
The writer in the Republican accuses the farmers of loving money better than other men, and says, that in order to gratify this passion, they make slaves of their wives, and that "while they are enjoying the ease and luxury of independence, the cares of their faded and broken down wives, know no relaxation." Are farmers more avaricious than other men, and is the dollar *their* only standard of respectability? I have always supposed that wealth was more powerful in the city, and among commercial men, than in an agricultural community: and where, if not in the country, do wives receive their due share of kindness and attention from their husbands? In this section of New England, the wives and daughters enjoy the reward of their toil sooner than the husbands and farmers; owing perhaps, to the fact that the female character is more susceptible to the alluremements of fashion and luxury than the other sex, so that there are more fine ladies than gentlemen, to be found in farmer's families. The writer in the Republican goes on to say, "that from such a life, the girls of our day are learning to shrink, because they know they are to be sacrificed." Girls who have been taught to despise labor, and to spend their time in frivolous amusements, would of course shrink from such a life. But those who are willing to be useful, who desire to become truly independent, know that they are making no sacrifice in becoming farmers' wives. There is one class of writers who would deprive the farmer's family of all participation in the accomplishments of modern female education, and consider them fit only for the drudges which the first writer alluded to describes them to be. This latter class would graciously allow them to spend their winter evenings in listening to some useful, practical work on natural history, the management of bees and the like, read by one member of the family, while the rest are employed in knitting. They do not seem to consider them capable of appreciating the beauties of poetry and elegant literature. Perhaps they might permit them to read Thompson's Seasons, and Bloomfield's "Farmer's Boy," as having reference to rural pursuits in general. Is there any reason why a farmer's wife and daughters should not receive the same education, and be allowed to read the same books which are considered proper for females of other classes?

Now I, for one, protest against this constant interference with our rights and privileges. Farmers are as intelligent, and as capable of taking care of themselves as the merchant or mechanic, or the professional man, and they have too much freedom to be placed under the guardianship of those who know nothing about them or their employment. Let us spend our time as we please, provided no other person's rights are interfered with. If we prefer doing our own cooking to having it half done by girls who feel little interest in doing it well, why may we not be allowed the privilege?

There are some who seem to think the farmer in a very degraded condition, and who kindly wish to elevate him. Now if this is really their object, the best way to accomplish it, would be to endeavor to render labor respectable, and to teach the rising generation that industry is the surest road to respectability. There can certainly be no employment so well calculated to refine the character, and 'develop the noblest faculties of our nature, as farming. provided the cultivation of the mind is not neglected; and for this there is no necessity, and indeed no excuse. Any farmer can find sufficient time and opportunities for reading and study, if he is disposed to improve them. A Farmer's Daughter. *Manchester, Vt., Sept.* 20, 1849.

A Cheap Farm Gate.

This design is for a gate four feet high and twelve feet long; but they can be made of any required length or height The rails and forward upright are 2+3 inches, and the hind upright 3+4, framed together. The cross pieces may be round, made of small hemlocks and peeled, or they may be of sawed stuff an inch square. The rails are bored with an inch auger, two holes side by side, and slanted each way to accommodate the cross pieces, which are a foot apart. After the gate is put together, nail the cross pieces at each end, and nail them together in the middle with wrought nails, which should be clinched. The post on which the gate is hung, has a plank cap on top with a hole through it for the round tenon on the upright piece of the gate; at the bottom it may turn in a piece of wood morticed into the post, or what is much better, in a stone, with a hole drilled in it about an inch.



89—FARM GATE.

The advantages of this gate are, its cheapness —a man can make one in about six hours, and there is no iron about it except the nails,—and it will not *sag*, as the cross pieces brace each way, thus remedying the great defect to which gates are liable. W. L. Eaton. *East Weare, N. H.*

Cisterns for Live Stock.

I have a water-lime cistern ten feet in diameter, and six feet deep, which has been estimated to hold 90 barrels. For nearly two months of our late very dry season, it has chiefly furnished the drink for half a dozen cows and four horses, while many farmers who had no such cisterns, drove their cattle to considerable distances.

In some parts of England it has been found that the rain from the roofs of the necessary buildings on a farm, is sufficient, if saved, for all their live stock through the year; and we put the question. Are not *cisterns* as cheap as *wells?* Many wells in this part of the country, especially in the Hamilton Group, are not fed by springs in severe drouths and become in effect, cisterns, soon to be exhausted. Without any roof to turn in more water, they are useless till the soaking rains of autumn, saturate not only the soil, but the subsoil to considerable depths. On the contrary, a cistern which depends on a roof for its supply, may find business for its pump after a very moderate shower.

Water-lime cisterns will not yield soft water for a long time after they are in use. Ours was plastered anew five years ago, and great improvement is yet needed in its quality for washing. Another hint may be useful. Water-lime plaster requires to be covered up completely from the frost. After an unsuccessful experiment, we had timbers laid across the cistern, covered with two-inch plank, and pine shavings to the depth of two feet. It was then carefully sodded over, and we have discovered no encroachment by the frost. Aquarius.

☞ A lady at my elbow says, the expense (including damage) of driving cows long distances to water, is greater than to turn all the rain from the barn roof into cisterns; and she also suggests that farmers should not bring their cattle round the house, or into the door-yard, where mud would be made for their wives to scold over.

Profits of Farming.

Eds. Cultivator—I notice an article in the September number of *The Cultivator*, signed "A Farmer, *Hillsdale, Columbia County*," containing statements of the comparative productiveness of capital and labor, as applied to farming and other pursuits, suggested by the table in the July number of your paper, giving the estimate of the principal products of Seneca county, for the year 1848. He says—"that notwithstanding the superior advantages and management of the farmers of Seneca county, still the income on their capital and labor is vastly inferior to that of any other of the great industrial interests of our country." Now, on examining that table, I find the following results, viz: that the average nett profit over cost of production on the land devoted to wheat, was $11.25 per acre; on the land in Barley, $6.13 per acre; on that in Oats, $5 per acre; and on the corn lands, $7.25 per acre; and that the average of the whole 64,363 acres, devoted to these four principal products, was $9 per acre.

Assuming the average value of these lands to be $50 per acre, which I imagine is a liberal estimate, I find that the income or nett profit of capital would be, on the wheat lands, 22½ per cent.; on that in barley, 12¼ per cent; on that in oats, 10 per cent; and on that in corn 14½ per cent.; and the average rate upon the whole 64,363 acres, 18 *per cent. nett profit!* Now I would ask, what "other of the great industrial interests of our country" does or can produce an "income on their capital and labor" like this? Certainly not the manufacturers of New England, which I believe to be at this time as profitable as those of any other country in the world—and which, I think I may say without fear of contradiction, have not netted their owners for the ten years past, a profit exceeding 7 per cent. per annum upon their capital.

In the same September number of *The Cultivator*, is a statement of the products of the Lakeland farm of Mr. Foster, in that same Seneca county, in which 55 acres of wheat land, (the only crop of which particulars are given,) are stated to have produced 28 per cent. on the value of the land! Certainly I would not offer this premium farm as an exponent of farming in general, but I take it in some measure as an exponent of what farming *might be*, if the same skill, economy and capital was devoted to it as there is to many other of the great industrial pursuits. Again, "A Farmer" says that "the income of all the other great industrial interests of our country, is shown by the census to be from one hundred to two hundred pr cent. upon their capitals;" and to prove this, quotes in a note, the census of Massachusetts for 1845, where the manufacturing capital of that State is put down at over forty-six millions of dollars, and the value of their products at nearly eighty-eight millions "or," he adds, "near two hundred pr cent. on capital employed, and near $700 annual income from the labor of each individual." Here, it seems to me, is an important error, occasioned by leaving out of view the value of the raw material, which the manufacturers work upon, and which, though constituting a great part of the value of their productions when finished, is yet in no sense *their* production; for example—the cotton manufacturer, out of a pound of cotton, costing 12 cents, produces three yards of cloth, which netts him six cents per yard, amounting to 18 cents. Now the production of *his* labor and capital is not 18 cents—it is only *six cents*, the increased value of the cotton over its cost, and this is about the average proportion of the products of our manufacturers generally. So that instead of taking the *income of capital and labor* employed in manufacturing in Massachusetts at the "value of their products" when sold, it should be stated at only *one-third* of the amount; thus, the income from the capital and labor of the manufacturers of Massachusetts should be put down at twenty-nine millions, instead of eighty-seven millions and over—which would leave for each hand employed, 230 dollars annually, instead of near $700," as stated by your correspondent; and showing too, the earnings of individuals engaged in agriculture, by his own statement, to be nearly seventy dollars per year more than those engaged in manufacturing, &c.

It seems to me that the profits of capital and labor devoted to agriculture, have never been ascertained and understood in this country, and that a more thorough examination and calculation would show, that agriculture might be made to be what God intended it should be, the *most profitable*, as well as the *most natural* and *happy* pursuit of man. Enquirer. *Stockbridge, Mass., Oct. 5*, 1849.

Agricultural Show in Scotland.

We have received a copy of "*The Scottish Agricultural Journal*," containing an account of the show of the Royal Northern Agricultural Society, held at Aberdeen in August last. It was the fourth exhibition of this association, and appears to have been a fine display of stock, implements, fruits, &c. At the dinner, at which the Earl of Aberdeen presided, Mr. Pliny Miles, formerly of Watertown, N. Y., responded, in a very felicitous manner, to a toast. "He said he was a son of a New York farmer who had received three first prizes from agricultural societies. They carried on a reciprocity system in the agricultural societies of the United States, which deserved attention. For instance, the society of New-York co-operated with Upper Canada, and exchanged the right of competing in the respective societies. The exhibition of live-stock which he had seen that day, was superior to what he was accustomed to see in America—not in number, but in quality. He had been extremely well pleased to observe the perfection to which the cultivation of fruits had been carried in Scotland. He had picked strawberries in the open air in Florida, in the month of February; but he had certainly never seen better strawberries, cherries, and peaches, than he saw at the Horticultural Show that day. He had seen, indeed, better pears and apples, but altogether he had been astonished at such an exhibition of fruit in this northern climate, where there must be so short seasons. With reference to Sir James Elphinstone's remarks regarding the scarcity of agricultural implements, he would take leave to say, that the inventive genius of the Yankee had contrived a great number of these implements. One reason might be the cheap rate at which patents might be secured—for $30 any invention might be patented, from a mouse-trap to a steam-engine. (Laughter and applause.) He was a stranger in this city, and he could say, without compromising himself as an American and a republican, that he had drunk the health of the Queen and Prince Albert, and to the Navy and Army of Great Britain, for he considered that the governments of Great Britain and the United States, differed far more in name than in reality. (Loud cheers.) He considered it rational, and even laudable, in an individual to leave his own country with some national prejudice in its favor; but whatever prejudice he entertained against Great Britain had been entirely dispelled since his acquaintance with it. In conclusion, Mr. Miles returned his cordial thanks for the honor which had been done to his country and to himself. (Loud applause.)"

Improved Cotswold Sheep.

In answer to "J. P. R." in our September number, J. W. Ware, Esq., of Berryville, Clark county, Va., writes: "I import the improved Cotswold, called by some New Oxfordshire, for my own private use, not for speculation by sale." He states that he has purchased a part of his sheep from Mr. Charles Large, near Lechdale, Oxfordshire. Mr. W. says: "I wrote to him to send me none but Royal Prize Sheep, whenever he could spare them. I put no limit, but paid the sum he demanded; presuming that the best, of course, would be exhibited for the prize, and especially directing none to be sent but the prize sheep. Last year I received two ewes from the pen that took the prize at the Royal Society's Show at York; this year I have purchased five of the ewes that took the prize at the Royal Agricultural Fair at Norwich, to come over this fall after being tupped by a ram weighing, alive, 420 lbs., which took the prize of £40 as the best shearling long-woolled ram, at the Royal Agricultural Society's Show in 1847. When I use the words 'royal prize,' I mean, always, the prize given by the Royal Agricultural Society of England. I do so to avoid an unnecessary frequent multiplicity of words, believing the term used would be fully understood, for I am not aware that the *Queen herself individually* gave any prize, and of coure I could not be suspected of wishing to mislead by an improper expression."

Decay of Timber.

Eds. Cultivator—There are few people more deeply interested in that species of knowledge, which will enable us to detect the cause, and lead us to the discovery of means whereby we may delay the decay of timber used in building, than the farmer; yet how few there are who pretend to any knowledge on the subject, further than the adoption of some favorite idea, such as setting fence-posts top-end in the ground, or cutting timber at a particular time in the moon, or charring the lower end of fence posts, &c., without going back further than the first step towards the cause, if any exists, of the success of a fancy theory.

Circumstances frequently arise in practice which would seem to verify any favorite theory that might be adopted. For instance, there are no two adjoining trees of the same species, perhaps, that would endure the same length of time without decay; nor is there any one tree whose parts are all equally durable; the top part may be more durable than the butt, in one tree; and another in the immediate vicinity, of the same kind, but of different age, may be precisely the reverse. Hence the various conclusions which have been arrived at from experiments without a knowledge of the principles of premature decay.

There is not a month in the year that has not authority for being the best time for felling timber; and each author gives philosophical reasons as far as they go; but as the business of our philosophy is to sustain our conclusions, which have been established by experience, and of course, (as we think) cannot be wrong, we barely bring a few isolated facts as sufficient proof after our experience, to establish the theory beyond a doubt, when perhaps if those same facts were presented in connection with others, which would serve to arrange them in their proper order, they would sustain quite a different conclusion. There is a right place to begin, as all good farmers will be inclined to admit, to do anything they have to do, and no one has more to do with this subject; which is best considered, by seeking to designate that part of, or substance in timber, in which decay first commences. This has been identified by Mr. Kyan as albumen, which he says is the cause of putrefactive fermentation. The celebrated chemist Fourcroy, says there are five distinct species of vegetable fermentation; the saccharine, the coloring, the vinous, the acetous, and the putrefactive; but none are concerned in premature decay but the putrefactive. If then we take Mr. Kyan's opinion, which seems to be generally admitted by all who have observed the subject to any extent, we shall arrive at our conclusion, that the year and the season of the year in which a tree contains the least albumen, is the best time to cut it, unless the fibres of the wood have been too much weakened by age or disease. All timber for durability, should be mature in its growth, and if not diseased, it may stand a number of years after to advantage, if to guard against decay be the main object.

There is undoubtedly a particular time in the year when timber may be cut to favor its durability. In the present unsettled state of that point, we may locate it in the month of October in this climate, for more reasons than have ever been mentioned. We have good authority for believing that there is in the timber at this season, the smallest quantity of albumen and cambium, if not all other organic fluids liable to produce that species of fermentation which furnishes the acid necessary to unite with the albumen to produce the putrefactive fermentation. In cutting timber at this season of the year, we have the advantage of five or six months of weather cold enough to prevent any species of fermentation, or the propagation of any species of fungi; which is time enough, with proper care, to prevent any inherent cause of decay.

We also have good authority for cutting timber in mid-winter; but our own observation will create a doubt, when we see a tree with full grown leaves in the spring, that had been entirely severed from its roots the previous winter. The decay of timber is generally accompanied, if not caused, by some species of fungi, the spores being attracted by the albumen, or perhaps by the action of the albumen and acid, which together produce that species of fermentation peculiar to decay. Whether this be the case or not, it is evident from every day observation, that the exciting cause of decay in healthy timber, is produced by some external influence, which enters the pores of the wood where the grains have been cut across, more readily than it does lat erally through the unbroken grains, which is the cause of decay in the ends of a log, while all other parts remain comparatively sound. It also favors the frequent observation, that a round fence post, the full size of the tree, will last longer than one of the same size split from a larger tree.

The idea of charring the lower ends of fence posts, was probably taken from the well known practice of architects charring wood to be laid into walls, or in places where it is subject to dry rot. It can be of but little service to timber for any purpose, that has not been thoroughly seasoned, and afterwards kept dry. The object of charring is to destroy the seeds or spawn of the fungi, if any have accumulated on the surface of the timber, but if the timber be not dry, or if exposed to wet afterwards, the charring can be of very little if any protection against the common effects of moisture in timber. It is possible that the moisture which enters through the charred surface, may be so purified as not to be so liable to putrefactive fermentation, as that which enters through other parts; then in order to derive benefit from charring fence posts, they should be charred above as well as below ground. DEAN.—*Lyonsdale, N. Y.*

Exhibitions of Agricultural Societies.

A greater interest has been manifested in these exhibitions the present year, than at any former period. From all quarters we hear that the displays have been on an increased scale, and the people have turned out to witness them in unprecedented crowds, often in face of wind and storm. We have received accounts from the following societies:

NEW YORK.—Counties—Queens, Suffolk, Rensselaer, Saratoga, Washington, Essex, Clinton, Jefferson, Fulton, Herkimer, Oneida, Madison, Onondaga, Seneca, Cayuga, Ontario, Orleans, Monroe, Livingston, Genesee, Erie, Niagara, Wayne. In addition to these, we have accounts from several town associations, particularly Avon, Livingston county, and Vernon, Oneida county. Several counties have adopted the plan of making permanent enclosures and erecting suitable buildings for the shows, charging all, except members of the societies and invited guests, a small admission-fee. This is the true plan, and will, under proper management, put the societies in possession of funds which may be used for the promotion of various improvements. The Rensselaer county society has excellent fixtures at Troy, and received at the last exhibition $2,200. Saratoga has provided grounds at Mechanicsville, and at its first exhibition there, the present season, received a liberal acquisition to its funds. Essex and Clinton have made a location at Keeseville, and hold their exhibitions on the same grounds and at the same time. A collection of seven to eight hundred dollars, was made at the first show held under this system, this season.

CONNECTICUT.—Litchfield, Hartford, New Haven, and Fairfield.

MASSACHUSETTS.—Berkshire, (shows at Pittsfield and Great Barrington) Worcester, Norfolk, Essex, Middlesex, Plymouth, Bristol.

VERMONT.—Windsor, Rutland, Addison and Chittenden.

MICHIGAN.—Frst State Fair, at Detroit—$2,800 received from the sale of tickets and for memberships.

GEORGIA.—State Fair at Stone Mountain—crowd estimated at six thousand. The *Southern Cultivator* says it was "the great event of the season," and that "everybody went away highly gratified."

We shall undoubtedly receive further accounts, and be able to give more particulars hereafter.

In relation to Seneca Co., N. Y., J. DELAFIELD, Esq., writes: "Our Fair was most successful. The cattle were numerous and excellent. The horses equal to any former exhibition; and this county has produced many of the finest animals in the state. The other departments were good, and so generally interesting was this celebration, that the village of Ovid was crowded for two days, taxing the liberal hospitality of all the residents, for the accommodation and comfort of visitors from a distance. The claim was cheerfully met, and thousands dispersed at the closing of the fair, with the kindest feelings, and hopes for many and oft-repeated gatherings, like this county fair."

Farming in Pennsylvania.

The following notice of the products of several farms in Montgomery county, Pa., is furnished by the Norristown Register:

Mr. George Hiltner, who lives on his farm, in the northeastern part of the township, containing 22 acres of cleared land, gave an account of its products, as follows: Wheat, 16 bush. on one acre, amount $17,60. Rye, 50 bush. on 3 acres, amount $30. Corn, 60 bush. on 3 acres, amount $36. Apples, 20 bush., amount $2. Hay, 8 tons on 8 acres, amount $96. Oats, 40 bush. on 3 acres, amount $12. Poultry, 50, amount $12. Eggs, 50 doz., amount $6,25. Butter, 500 lbs, amount $100. Calves, 4, amount $20. Potatoes, 40 bush., amount $28. Pork, 600 lbs., amount $36. The whole amount from the products of Mr. H.'s farm was $395.85.

Mr. Francis Davis, who lives on his farm, in the eastern part of the township, not far from the line between it and Whitpain, containing 47 acres of cleared land, gave the following account of its products: Wheat 100 bush. on 4½ acres, amount $105. Rye, 14 bush. on 1½ acre, amount $9,80. Corn, 200 bush. on 7 acres, amount $120. Hay, 20 tons, on 14 acres, amount $240. Oats, 200 bush. on 6 acres, amount $60. Poultry, 60, amount $18. Eggs, 150 doz., amount $24. Butter, 900 lbs., amount $180. Calves, 6, amount $24. Potatoes, 5 bush., amount $4. Pork, 1000 lbs., amount $60. The whole amount from the products of Mr. D.'s farm was $984,80.

Mr. George Freas, who lives on his farm, near the last mentioned, containing 44 acres of cleared land, gave an account of its products as follows: Wheat, 120 bush. on 5 acres, amount $138. Rye 15 bush. on ½ acre, amount $12. Corn, 200 bush. on 6 acres, amount $120. Apples, 60 bush. amount $12. Hay, 22 tons on 14 acres, amount $264. Oats, 240 bush. on 6 acres, amount $72. Poultry, 100, amount $40. Eggs, 100 doz., amount $14. Butter, 1200 lbs., amount $240. Calves, 7, amount $35. Potatoes, 20 bush., amount $16. Pork, 1500 lbs., amount $90. The whole amount from the products of Mr. F.'s farm was $1053.

Mr. Henry Lysinger, who lives on the Germantown and Perkiomen turnpike, on his little farm, containing 11 acres of cleared land, gave an account of the products as follows: Wheat, 20 bush. on 1 acre, amount $22. Rye, 12 bush. on ½ acre, amount $8.40. Corn, 75 bush. on 1½ acre, amount $45. Apples, 100 bush., amount $25. Hay, 6 tons, on 3 acres, amount $72. Poultry, 30, amount $10. Eggs, 25 doz., amount $5. Butter, 350 lbs., amount $70. Calves, 2, amount $10. Potatoes, 8 bush., amount $6. Pork, 700 lbs., amount $42. The whole amount from the products of Mr. L.'s little farm, was $313.40.

Mr. Andrew Reed gave an account of the products of the farm on which he lives, near Plymouth creek, containing 117 acres of cleared land, as follows, viz.: Wheat, 400 bush. on 14 acres, amounting to, at prices sold. $420. Rye, 15 bush., on 1 acre, amount $12. Corn, 400 bush. on 15 acres, amount $260. Apples, 500 bush., amount $65. Hay, 50 tons, on 30 acres, amount $650. Oats, 500 bush. on 15 acres, amount $175. Poultry, 100, amount $30. Eggs, 150 doz., amount $22.50. Butter, 4000 lbs., amount $1160. Calves sold, 22, amount $154. Potatoes, 60 bush., amount $40. Pork, 3500 lbs., amount $210. The whole amount of products from the farm on which Mr. R. lives, was $3198.50. Mr. Reed has 23 very fine cows, some of which are worth from $40 to $50.

Mr. Henry Ortlip, who lives on a farm about a mile below Norristown, on the Ridgeroad turnpike, containing 48 acres of cleared land, and 4 acres of woodland, and keeps a public house, gave the following account of its products, viz.: Wheat, 100 bush., on 7 acres of land, amounting to, at prices sold, $110. Rye, 50 bush. on 5 acres, amount $35. Corn, 120 bush. on 7 acres, amount $72. Apples, 50 bush., amount $10. Hay, 15 tons on 14 acres, amount $225. Oats, 224 bush. on 9 acres, amount $75. Poultry, 70, amount $28. Eggs, 100 doz., amount $14. Butter, 150 lbs., amount $37.50. Timothy seed, 1 bush., amount $3. Calves sold, 2, amount $10. Potatoes, 30 bush., amount $25. Pork, 1100 lbs., amount $66. The whole amount of the products from the farm on which Mr. O. lives, was $710.50.

Mr. Thomas Livezy, who lives on his farm, on the Germantown and Perkiomen turnpike, containing 105 acres of cleared land, and 11 acres of woodland, gave the following account of the products from his farm, viz.: Wheat, 500 bush., on 16 acres, amount $550. Rye, on 1 acre, amount $20. Corn, 800 bush. on 15 acres, amount $480. Apples, 20 bush., amount $8. Turneps, 200 bush., amount $40. Hay, 70 tons, on 44 acres, $1050. Oats, 300 bush., on 6 acres, amount $100. Poultry, 100, amount $25. Eggs, 60 doz., amount $9. Butter, 400 lbs., amount $80. Cattle sold as products of his farm, amount $300. Clover seed, 7 bush., amount $35. Timothy seed, 3 bush., amount $9. Calves sold, 5, amount $25. Potatoes, 70 bush., amount $42. Pork, 2500 lbs., amount $150. The whole amount of the products from Mr. L.'s farm, was $2923.

November.

BY A FARMER'S WIFE.

I come, I come, with an aspect drear
To scatter the leaves, all wither'd and sere;
I blow o'er the landscape my frosty breath,
The plants to prepare for a wintry death.

Sad is my wail in the merchant's ear—
Visions of shipwreck and tempests appear;
He turns on his pillow, unable to sleep,
Or leans on his desk, in reverie deep.

Av'rice gloats o'er oppression and wrong,
The miser scowls. as I whisper, how long
Wilt thou, from the hireling. wages withhold?
The curse of the kind, corrupteth thy gold!

The lone orphans listen in sorrow,
As they bitterly think of the morrow—
To them I would say, this truth ye may heed,
A *Father* thou hast, a *Friend* in thy need.

Through the long nights and cloudy days,
I pipe to the weary farmer my lays;
They are not sad to the son of the soil;
I bid him enjoy the fruit of his toil.

The granary filled, the harvest all home,
His flocks and his herds forbidden to roam;
Hale sons and daughters encircle his hearth—
A king might exchange his crown for their mirth.

List to my song—remember the poor—
Winter, pale winter, is e'en at the door—
The blessings of those who share of thy bread
A halo of joy will be to thy head.

Maryland State Fair.

Hon. JOHN A. KING, President of the New-York State Agricultural Socity, and B. P. JOHNSON, Esq., Secretary of that association, attended the Maryland State Fair as delegates from this State. Mr. J. gives an interesting account of the show in the Journal of this city, from which we take the following:

This is the second exhibition of the society, and reflects great credit on its enterprising officers. The exhibition of cattle was remarkably good, and many of the animals will bear a comparison with any which have been shown in New-York, or in any other portion of this country. Col. CALVERT, the President of the Society, exhibited 29 full bred short horns, two Holstein or Dutch Cows, four Aldernys, several Ayrshires, one Spanish Cow, one Devon, and in all, some forty or more. Many of these animals were of unsurpassed excellence. His short horn cows are mostly prime milkers; several of them yielding, I was assured, from 25 to 34 quarts of milk daily. Their appearance indicated first rate dairy properties. He had two aged bulls, to whom I believe the first and second premiums were awarded. One of them, mostly red, a fine, noble animal—that I doubt not will leave valuable stock—several heifers from him were on the ground, and their color and form would satisfy even Devon men, who so much admire the red.

Col. Horace Capron, of Prince George's county, had the next largest lot of cattle. His were Short Horns, Devons, Ayrshires, working oxen, &c. Several of his animals were of rare excellence, both Short Horn, Devon and Ayrshire. His Bull "Valentine" received the first premium last year—and he had two very superior Devon Bulls—with all the fineness, style, and beauty of that breed. Among his Cows were some very extraordinary fine animals. His Oxen were Devons and equalled our best. This stock was for sale; and I noticed that many had been sold at prices varying, I believe, for the young and old, from $50 to $275. Col. Capron had three span of Mules on the ground that went far to obviate my objection to them. I now unite with Mr. Skinner in favor of these useful animals. They were large, active and vigorous animals, and sold readily for $900 the team.

There were a number of other exhibitions of fine stock, but I cannot particularise.

A. Clement, of Philadelphia, made a fine show of Short Horn and mixed stock.

Mr. Holcomb, of Delaware, fine show of Devons, &c.

W. G. Dobbin, of Maryland, exhibited a Holstein Bull and two Cows, imported. The bull was a very fine animal, color black and white, and the cows showed, I thought, valuable dairy properties, for which the breed is noted in Europe.

The display of long wooled Sheep was unusually rich. C. B. Reybold, of Delaware, had his unrivalled New Oxfordshires on the ground; one fat two year old weather was slaughtered; his weight not far from 190 lbs. There were several pens of Sheep—among others one from Virginia of the same breed as Mr. Reybold's, and of perhaps equal excellence. No fine wooled sheep exhibited; and but one pen of South Downs which I noticed.

The Swine were very superior: Chester county, Leicester, Delaware, Berkshire and Dutchess county breeds were the most prominent. J. Wilkinson of the Mount Airy School, near Philadelphia, formerly from Dutchess county, exhibited the Dutchess county breed, which were much admired. He sold three pairs of pigs 6 months old at $50 a pair to go to Virginia and Georgia, and I should think a cross from them would materially improve the swine of of the South. The show of poultry was very extensive and of many choice varieties. I was surprised to find that horses for which Maryland was once so distinguished, are now much neglected. Only some half a dozen were on the ground, and those of no very superior attraction.

The show of implements was large. The ladies' department rather limited. The dairy products represented by a few samples of butter, and the show of vegetables not large.

Gen. Taylor visited the grounds, Wednesday, Thursday and Friday, and expressed himself highly gratified with the entire exhibition. He mingled freely with the farmers, and showed by his inquiries and examinations that he was familiar with the implements necessary for the farmer, and that he was an attentive observer of the improvements going on in our country, to advance this great interest.

The receipts at the gate on the 2d day of the exhibition I understood were about $1,000; and I should think quite as much the last day.

Patent Hoops.

We noticed at the late Fair a specimen of hoops made on a new plan, and have received the following description of them:

These patent hoops were made by Heffron and Landphere's Hoop Machine. The process is as follows: The timber is first sawed into boards, then split by a buzz-saw into square pieces, then turned and slit by the machine, each square piece making two, half round hoops. Any tough timber, however large, can be thus converted into hoops of a most beautiful appearance. They set well by soaking in a vat of cold water; but hot water is better. The butter from one dairy has been packed in firkins bound with these hoops, and a portion sold in New-York at a price equal to the best "fancy hoops." The Ohio Fancy Flour Hoop, sells the flour thus bound at about five per cent. more than flour equally as good bound with the flat hoop; and it is confidently believed by the inventors of the Hoop Machine, and all whose opinions have been given, that it is destined to add from two to five per cent. to the immense quantities of flour packed in this State. The machine makes six in a minute, and they can be afforded as cheap as the flat ash hoop. These hoops were presented for examination at the State Fair at Syracuse, by D. S. Heffron, of Whitesboro, Oneida Co.

Challenge.

Rev. J. R. Smythies, a noted breeder of Hereford cattle, makes the following offer through the *Mark-Lane Express:*

I hereby offer to show four Hereford steers, whose ages shall not exceed two years and three months, and four whose ages shall not exceed one year and three months, at the next Smithfield Show in December, against eight shorthorns and eight Devons, of similar ages, for a sweepstakes of one hundred sovereigns for each lot; with this stipulation—that each lot shall have been bred by one man, and that they shall have lain at grass at least four months this summer, without having had anything but what they got there. But this is not all. I am willing to test their hardiness as a breeding stock, as well as their feeding properties. In order to do this, I propose to turn my two-year-old heifer, which gained the first prize at Norwich, into a pasture with the two-year-old shorthorn and two-year-old Devon heifer, which obtained the first prize in their respective classes, and let them remain there till the next meeting of the Royal English Agricultural Society at Exeter, next July, giving them nothing but what they can get, except a little hay from the 5th of November till the 5th of May; the heifers to be shown at Exeter for a sweepstakes of a hundred sovereigns each. But in case the owners of either of the heifers should object to the amount of the stake, I am ready to show them for nothing, if the society will consent to give a cup to the winner; and I do not know how they could lay out their money better, for this is a question of the utmost importance, and one that ought to be decided as early as possible, and can only be settled by the animals being brought into close contact in the way I propose. If any shorthorn or Devon breeder can point out a fairer way of testing their respective merits than the one I have proposed, I shall be ready to meet him in any way he likes. I am not nice to a shade how the experiment is tried, so that the animals are brought fairly into competition with each other. I hereby declare that I am ready at all times to produce Hereford beasts against any other breed in the United Kingdom, either as rearing or feeding stock, and to back my opinion.

Answers to Correspondents.

Work on Bees.—A. C. L., Fredericktown, Mo. Week's Manual contains much information which would be especially useful to a beginner in bee-keeping. A small work was published at Cincinnati several years ago, by Thos. Affleck, which we would recommend to your attention. Of larger works, Dr. Bevan's is much approved.

Ice-House.—S. M. N., New Marlborough, Mass. You will want an entrance to the ice-house from the outside, for convenience; but it may also be convenient to have an entrance connecting the ice-house with the cellar. The atmosphere of an ice-house is usually too damp to keep butter; a cool, dry room, perhaps adjoining an ice-house, would do better.

Barley for Feed.—The common two-rowed is usually most productive. There are several new kinds, as the Chevalier, the Black, &c., which have as yet been little tried here, but may prove profitable.

Common and Indian Buckwheat.—The Indian buckwheat is not saleable in market—it does not make palatable flour. As to the comparative value of the two kinds for *feed*, you can get the best idea by feeding a pig on one kind for a given time, then weighing the pig, and changing to the other kind for the same time, shifting, alternately, for a month, or longer.

Clay Soil.—O. J., Brewerton, Onondaga Co. Plow this soil as deep as practicable, in ridges, this fall. Drain off the water, by under-drains, and the soil will break down fine by the plow in spring.

American Silks.—Mr. J. W. Gill, of Wheeling, Va. exhibited splendid specimens of various kinds of silk goods at the late show of the American Institute. They consisted of vestings, dress-silks, handkerchiefs, cravats, shirts and hose. Mr. G. has expended a large amount of money in the establishment of the silk business, and we were satisfied from what we saw of his operations several years since, that he would ultimately succeed. We are glad to learn that his returns afford a fair interest on the investment.

Notes for the Month.

Communications have been received, since our last, from Arthur S. Copeman, A Farmer's Daughter, D. H. W., Enquirer, Dean, An Observer, Aquarius, Edgar M. Woodford, A Farmer's Wife, S. M. Norton, A Farmer, H. V. L., Old Suffolk.

Books, Phamphlets, &c., have been received as follows:—Descriptive Catalogue of Garden Seeds, cultivated and sold at the Wethersfield Seed Garden, by Comstock, Ferre & Co.—The Scottish Ag. Journal for August—Report of the Commissioners of Patents for 1848, from Hon. Wm. L. Dayton, M. C.—A Basket of very fine Isabella Grapes, from Dr. Underhill, Croton Point.

"Northern Sweet" Apple.—We have received from Mr. J. Battey, of Keeseville, Clinton county, N. Y., a specimen of this apple. We think it is superior in quality to any other sweet apple we have ever seen. It is of good size and fine form. It ripens in October and continues into November. We understand it originated in Chittenden county, Vt.

Substance on a Pear.—Mr. J. S. Doane of Kinderhook, has left us a pear on which there is a substance having the appearance of a species of fungus, but which is in reality the eggs of an insect—the hemirobius. This insect, in its larvæ state, is called the "lion of the aphides," a name significant of its habit of subsisting on plant-lice. In its perfect state, it is a beautiful four-winged fly, whose body is a glossy green. It lays its eggs, commonly, on the leaves of plants, which are affected by the aphis, and the young "lions" commence their slaughter as soon as they are hatched. They are provided with sharp and strong forceps with which they seize and hold the aphides till they can suck their juices. The manner in which the eggs are deposited is curious. The egg is covered with a viscous matter, and being in part protruded, is applied by the insect to the leaf; and as the fly withdraws its abdomen, the viscid matter is drawn out in the form of a thread, leaving the egg on the end, about half an inch from the leaf.

Castor-Oil Bean.—A subscriber wishes information in regard to the cultivation of the castor-bean, and the processes necessary to fit the oil for market, the machinery required for pressing, &c. Will some one acquainted with the business give us an article on the subject?

Exemption of Trees from Blight—In a visit to Mount Ida Farm, Troy, the residence of Henry Vail, Esq., in August last, we were struck with the healthiness and vigor of all the trees and shrubs. No "fire-blight" has ever touched the pear trees here, and the place has become noted for the production of the finest gooseberries, always unblemished by mildew. What is the cause of this exemption? is the question which naturally arises. In answer to this we will state some of the circumstances belonging to the location. The place comprises about forty acres, embracing a large portion of the top of a somewhat isolated elevation, several hundred feet above the river; thus ensuring a very free circulation of air. The soil is a slaty loam, generally rather loose at the surface, with a subsoil sufficiently open to allow the ready filtration of water. It has been highly manured with stable manure, which has been thoroughly mixed with the soil. We would suggest that the deep stirring of the soil, with the action of the ammonia of the manure, may tend to develop potash and other mineral elements in the earth, which are required by the trees; while the freedom from stagnant water in the soil and subsoil, prevents the formation of acids, which are prejudicial to vegetation.

Mr. Vail is devoting much attention to the culture of choice fruits, and his success in all departments has been highly satisfactory. The location, besides possessing the advantages we have mentioned, is one of the most beautiful in the country, commanding a splendid view of the surrounding scenery.

Crops in North Carolina.—Mr. S J. Wheeler, of Murfreesborough, N. C., writes: "Our crops of corn and peas are unusually good. Cotton only ordinary. The late frosts in the spring destroyed nearly all the fruit. We have a few apples; no peaches; figs and trees all killed to the ground. Otaheitan mulberry trees that were set out this spring *are injured*, but those that were set out one or two years ago *are every one dead*. Can you account for this?"

Mules.—The only specimen of this very useful kind of farm-stock at the State Fair, was exhibited by Josiah Cloyes, of Morrisville, Madison county. They were a pair of muscular animals, nearly fifteen hands high. Mr. C. has used mules on his farm for several years, substituting their labor for that of horses to a great extent, and he states that he finds the profit greatly in favor of the mules. He states the cost of keeping at two-thirds that of horses, and the mules do the same amount of work, ordinarily, that is done by the same number of horses.

Spanish Cattle.—At the Cattle Show of the Massachusetts Society for promoting Agriculture, held at Brighton, in 1828, there were exhibited several fat cattle said to have been the progeny of a Spanish bull. They were generally well shaped animals, and according to the recollection of the writer, were approved by the butchers. We have since seen at the Worcester shows, stock said to be descended from the same bull. Will some of our friends in Worcester county give us the history of the stock alluded to? Where did it come from, and what were its qualities?

Fall Crops.—A large portion of the northern section of the country, embracing New England, a part of New Jersey, and a large part of New York, has been visited by a drouth of unusual severity. Excepting some light showers, of very limited extent, rain did not fall in sufficient quantity to sensibly benefit vegetation, from about the middle of June till the sixth of August. In the northern part of New York, in Vermont, and portions of New Hampshire and Maine, the drouth came on so early as to lessen the hay crop to the amount, in many places, of one-half. In other sections, the hay crop, so far as heard from, was good. Throughout a large portion of New York, the oat crop, is nearly ruined, and Indian corn will be cut short to a large amount; though we are unable to tell, at present. what may be the effect of the late favorable rains in resuscitating the corn and potatoes. Grass is already beginning to show the benefits of increased moisture, and the fall feed may compensate, in a good degree, for the deficiency of hay in some sections.

Quality of Milk.—We have often remarked that it is the quality of milk, rather than the quantity, which gives value to the dairy-cow. Great astonishment is sometimes produced by statements of the large quantity of milk yielded daily, by some cows. But such statements are of little consequence. The most remarkable cows for the production of butter, have given but medium quantities of milk. For instance, the celebrated Sussex, or Cramp cow, which for several years made an average of 600 pounds of butter a year, gave, at the most, but twenty quarts per day; and the Oaks cow, which made 480 pounds of butter in a year, gave but sixteen to eighteen quarts per day. John Holbert, of Chemung, N. Y., states that he has found, by churning the milk separately, that *one* of his *best* cows will make as much butter as *three* of his *poorest*—all giving an equal quantity of milk. He states, also, that 100 pounds of milk drawn from his cows which give the richest milk, will make one pound more butter than 100 pounds drawn from the whole herd; and he adds, that there is more difference in the quality than in the quantity. His advice in conclusion is, that all dairymen look well to the quality of milk their cows give.

South Down and Leicester Sheep.—The two most popular breeds of sheep in England are South Downs and Leicesters. C. Hilliard, an experienced farmer and breeder, suggests to the Council of the Royal Agricultural Society, the propriety of offering a prize for sheep produced by a cross of these breeds. He uses the following arguments in favor of the proposition: "The South Downs do not come to sufficient weight of carcass in proportion to the quantity and value of the food consumed, and the Leicesters do not produce a sufficient quantity of lean meat to the fat. By an admixture of the two breeds—by putting a pure-bred South-Down ram to pure-bred Leicester ewes, I have, in the space of six years, established a breed that I find yield a better profit in feeding than either the South-Downs or Leicesters. The mutton is as fine as can be eaten, and the fleeces are of greater value than either South-Downs or Leicesters."

Stage for cutting Grass.—A writer on the scientific principles involved in the process of haymaking, lays down the following rules: 1. Grass must be fully developed before it is mown; if not, it will be found in its early stages to contain so much water as to be reduced, on drying, into so small a compass, that it will in quantity much disappoint the haymaker. 2. It must not be permitted to stand until its seeds are formed, much less ripe. All plants in arriving at maturity have their starch and sugar and gum in large quantities converted into woody fibre—a wise provision of Providence for enabling the stem to bear the matured seeds—and as sugar, gum and starch, are nutritive elements, it is desirable that these should be preserved, and hence the point for successful grass-cutting is that between the full development of the plant and before the formation of their seeds, in other words when they are in flower.

The proper drying and storing of hay should be strictly attended to. If it is put up with two much moisture in it, the fermentation is so violent that the hay is greatly injured in quality, and may be more or less consumed. But hay may be made too dry; for though a violent fermentation is to be avoided, a slight one is considered necessary to the full development of the best qualities of the grass; as there is little doubt that it is the vinous fermentation of the saccharine matter of the hay which renders it palatable to animals.

Cheese Factories.—In the Western Reserve, Ohio, where the making of cheese has been largely carried on for several years, a change of system has lately taken place to some extent. Certain men who are well acquainted with the manufacture of cheese, purchase the *curd*, unsalted, of their neighbors; and make it into that kind of cheese for which they find the readiest sale and best price. A single manufacturer sometimes uses the curd produced from the milk of several hundred cows. It is gathered every morning, by men who call at the different farms for that purpose. These large establishments are called "factories." The *Coneaut Reporter* notices some factories which it is stated use 3000 pounds of curd daily, making from twenty to thirty cheeses of from fifteen to thirty pounds weight each. Some of the cheese is sent to the English markets, some to the West Indies, and some to California.

Live Stock at Auction.—Attention is invited to the advertisement of Mr. Blakeslee, in this number.

Transmutation.—We have on hand several communications in reference to wheat changing to chess. While we desire to treat all our correspondents with civility, we do not think the publication of these articles would be generally interesting to our readers. We do not reject them because they express opinions contrary to our own, but because they throw no new light on the subject. All assume that because wheat failed to mature, more or less, where it was sown, and chess grew in its place, the wheat was transformed into chess! Now all we ask is the *proof* of this change. One correspondent says—"When I see wheat converted into chess, I must believe it." Aye, but does he *see* it? Does he absolutely know that the chess did not grow from chess? or did he "see" the miraculous conversion? We do not doubt the honesty of these statements—we admit that chess was found where wheat was sown—but we think the chess was produced, like every other plant, from seed of its own kind.

Shrunk Wheat.—The millers of Zanesville, Ohio, have published the following scale of prices, in view of the depreciated quality of wheat from rust, the present year:—

"Assuming that cleaned wheat, weighing 58, 59, and 60 pounds to the bushel, is worth 75 cents per bushel, wheat weighing

57	lbs.	would be	worth	72	cents.
56	"	"	"	69	"
55	"	"	"	66	"
54	"	"	"	62	"
53	"	"	"	58	"
52	"	"	"	53	"
51	"	"	"	48	"
50	"	"	"	42	"

For *white wheat*, 10 per cent additional on the above prices." Below 54 lbs. per bushel, superfine flour cannot be made, whence the rapidly diminished prices.

The Army Worm.—The Michigan Farmer states that twelve miles from Port Huron, on Black River, whole fields have lost their entire crops by the enormous numbers of these worms in their march from place to place, and that one tenant was actually driven from his house by the swarms which obtained possession.

Cheap Crop of Sweet Potatoes.—The Southern Cultivator contains a statement of Aaron Adkins, who raised 307 bushels of sweet potatoes—excellent food for cows at the South—on an acre of land, at a cost of about ten dollars, or about three cents per bushel. The potatoes, cut three inches long, were dropped into deep furrows three and a half feet apart, and a foot and a half apart in the furrow. They were covered with a plow; not hilled, nor hoed, but repeatedly cultivated with a shovel-plow, throwing the vines, when they became long, on one side, for one furrow, and on the other side for the next furrow. A small plow was used near the rows, and a larger one in the middle. They were plowed up out of the ground when harvested.

Plenty of Room.—According to the estimates of the General Land Office, the whole United States empire measures about two thousand million acres. If one half should be waste lands and forests, there would still be a thousand million acres. Intelligent agriculturists believe that each acre, under good management, will easily support its man, and if so, then the United States would support the whole of the present population of the globe.

Plums.—Several new plums have lately originated in this neighborhood, some of which will probably be found deserving propagation, as they possess qualities which are not common. We shall only notice a few at the present time, leaving others to be examined and decided on hereafter. One is in the garden of Messrs. E. & E. Dorr, of this city. The tree has borne two seasons, and was so much overloaded the present season, that the size of the fruit was somewhat diminished, and its quality injured. It is a beautiful plum, of the yellow class, with a thick bloom, and a deep blush on the upper side. Its shape resembles Coe's Golden Drop, and it is about the size of Bleecker's Gage. Its quality is nearly first-rate. It begins to ripen about the tenth of September, and it continued this season till the middle of October.

Another fine new plum has appeared in the noted plum-garden of Mr. Isaac Denniston, of this city. The tree bore for the first time in 1847, and we noticed the fruit in the Cultivator for November of that year. Mr. D. has since given it the name of *Madison*. It proves to be even later in ripening than we stated in our former notice. It may be said to be in perfection at the present time—October 16th—though there is still a large proportion on the tree. In shape and size it resembles the Imperial Gage, but its general color is lighter, and it is generally mottled or covered on its upper side with bright crimson. All who have tasted it pronounce it first-rate—nearly equalling the Green Gage—of which it is probably a seedling.

Absorption of Rain.—It is believed that if soils were sufficiently deep and fertile, nearly or quite all the water which falls would be needed, and but little would run off in streams. Hence, streams are found to diminish as population and improvement advances. It has been found that fifty-five or fifty-six inches of water falls annually at Natchez; and if forty-five inches be taken as the average for the whole Mississippi Valley, which is evidently within bounds, it will give an amount falling on the whole valley, ten times greater than the water discharged at the mouth of the river.

To prevent Horses running off.—When the Icelanders ride two or more together on horseback, and wish to dismount and leave their horses for any length of time, they tie the head of one horse to the tail of the other, and the head of the second to the tail of the former. In this reversed condition they can make no progress, and if they move at all they can only go in a circle.

Watermelons after Tomatoes.—Prof. Turner writing to the *Horticulturist*, says—" My watermelons planted where tomatoes had grown two seasons before, are of twice the size and vigor of growth of those grown in the same way and on the same soil, side by side." He asks, " Is this a general result?"

Durability of Red Cedar.—We have heard of an old farmer, who, when asked how he knew that Cedar posts would " last forever," said he had frequently tried the experiment. Some may doubt his assertion, yet its lasting powers have been found to exceed a long life-time. At the head of one of the graves in " Old St. Mary's," Md., there stands a cedar slab, which, as the inscription indicates, was placed there in 1717, and is still perfectly sound.

Prices of Agricultural Products.

New-York, Oct. 16, 1849.

FLOUR—Genesee, per bbl., $5.18a$5.25—Favorite western, $5.12½a$5.18—Fancy brands, $5.31a$6.25.

GRAIN—Wheat, Genesee, per bush., $1.21a$1 22—Red Missouri. $1.05—Corn, Western and Southern Yellow, 63½a65c.—Rye, 59½a60c.—Barley, 58½a61c.—Oats, 38a40c.

BUTTER—best, per lb., wholesale, 18a19c.—western dairy, 15 a17c.

CHEESE—per lb., 6a6½c.

BEEF—Mess, new, per bbl., $10a$10.50—Prime, $7a$8 Old Mess. $11.50

PORK—Mess, per bbl., $10.50—Prime, $8.50a$8.69.

LARD—per lb., 6½c.

HAMS—Smoked, per lb., non-pickled, 6a6½c.

HOPS—per lb., first sort, new, 12½a13c.

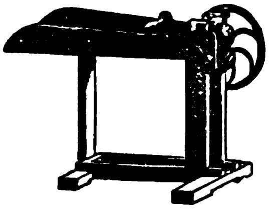
COTTON—Upland and Florida, per lb., 9½a11½c.—New Orleans and Alabama, 9½a12c.

WOOL—(Boston prices.)

Prime or Saxon fleeces, per lb.,	40a43c.
American full blood Merino,	35a37c
" half blood do.,	30a32c.
" one-fourth blood and common,	27a29c.

Remarks.—The cotton market is buoyant. Western and State flour is very heavy—the demand mostly for the home trade. There is a fair trade in grain at quotations. Beef and pork are in better demand, though chiefly for the home market.

Hay Cutters, Corn Shellers & Vegetable Cutters.

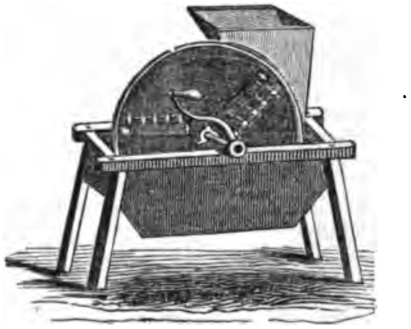


SPIRAL and Straight Knife and Gate Hay Cutters of Stevens, Ruggles, Nourse & Mason's, Hovey's and Rich's both for Hand and Horse Power. Also, Corn Stalk Cutters, for cutting, crushing, and making fine feed.

All the above are offered at the manufacturers' home prices, at wholesale and retail

CLINTON'S hand double and single hopper shellers. Smith's Patent cylinder power Corn shellers.

The above are warranted to be the best in use, and are afforded at the lowest prices.



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A large and general assortment of Implements of Husbandry—embracing every article required about the farm. Also, a good assortment of Grass, Grain, Field, Garden Seeds. &c., &c., constantly on hand at the Albany Agricultural Warehouse & Seed Store, Nos. 369 and 371 Broadway, Albany, N. Y.

Nov. 1. HORACE L. EMERY.

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☞ All orders to come free of postage and to be accompanied with the money for the numbers ordered

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For further particulars apply to either of the Professors.

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Onondaga, or Swan's Orange,
Duchesse d' Angouleme,
New Gray Winter Beurre,
Doyenne d' Ete, or Summer Virgalieu,
Columbia,
Bloodgood,
Vicar of Winkfield,
Beurre Diel,
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Sept 1.—tf.

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THE following works are for sale at the office of THE CULTIVATOR, No. 407 Broadway, Albany:

American Agriculture. by R. L. Allen, $1.
—— Fruit Culturist, by J. J. Thomas, $1.
—— Shepherd, by L. A. Morrell, $1
—— Poulterer's Companion, by C. N. Bement, $1.
—— Veterinarian, by S. W. Cole, 50 cents.
—— Herd Book, by L. F. Allen, $3.
—— Farmers' Encyclopedia, $4.
—— Flower Garden Directory, by R. Buist, $1.
Agricultural Chemistry, by Prof. Liebig, $1.
" " by Prof. Johnston, $1.25.
" " by Chaptal, 50 cents.
Cottage Residences, by A. J. Downing, $2.
Domestic Economy, by Miss Beecher, $1.
Domestic Family Receipt Book, by Miss Beecher, 75 cents.
Family Kitchen Gardener, by Robert Buist, 75 cents.
Farmer's Manual of Manures, by F. Falkner, 50 cents.
Fruits and Fruit Trees of America, by A. J. Downing, $1.50.
Farmers' Dictionary, by Prof. Gardener, $1.50
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ANY one who wishes to pay a good price for an active and industrious hand to manage a farm, one who has studied the principles and practice of modern farming, who can construct and repair buildings and implements, who is 27 years old and has a small family, address, *post paid*, CHARLES BETTS,
Burr Oak, St. Joseph Co., Mich.
Good references given and required. Oct. 1.—1t.*

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Seedlings.

A LARGE supply of Pear, Plum, Quince, and Buckthorn Seedlings, well grown and thrifty; also
Horse Chestnuts, one and two years old, for sale by
THORP, SMITH & HANCHETT,
Nov 1, 1849 —1t. Syracuse Nurseries.

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Nov. 1—1t. Watertown, Ct.

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WE will supply orders for Peruvian, Patagonian and Prepared Guano. Bone Dust, Lime, Ashes, &c., all warranted fresh, and to be the kinds that are ordered, at as low prices as can be had in this city. We have a large supply constantly on hand.

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THE CULTIVATOR

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THE CULTIVATOR.

"TO IMPROVE THE SOIL AND THE MIND."

NEW SERIES. ALBANY, DECEMBER, 1849. VOL. VI.—NO. 12.

Close of the Volume.

THE present number completes the current volume of the Cultivator, making the sixth of the new series, and the sixteenth from the commencement. The work has been so long established, and the public have been so familiar with its character, that it seems unnecessary to expatiate on this point.

The year which is just closing, has brought with it satisfactory evidence of PROGRESS in the "art of arts;" and we may confidently say, that at no former period has the world at large been so thoroughly impressed with the paramount importance of those pursuits, from which the food and clothing of the human race is derived. At no former period has so large an amount of practical, mental talent been devoted to the encouragement of the great interest of agriculture, and to the examination of the principles which form its foundation. The farmers of our own country are awakened; and having discovered the importance of their position in the frame-work of society, they are resolved on possessing the intelligence which shall enable them to discharge their civil and political duties with honor to themselves. In relation, also, to the practice of their vocation, a large proportion of the class have become convinced that "knowledge is power." Hence the greatly increased spirit of inquiry. The bugbear of "book-farming" has lost its terrors; men have the courage to read; by an enlarged course of reading, and a habit of observation, they are enabled to discriminate and apply understandingly and profitably. To extend the means of knowledge, to inculcate correct theory and sound practice, to furnish useful ideas and suggestions, has ever been, and will continue to be the aim of this journal.

We shall enter on our next volume with increased facilities for carrying out the design of the work, and have made arrangements which we think will impart to our pages additional interest and value. Among the most important of these, we have the satisfaction to announce that Prof. NORTON, of Yale College, will furnish a series of articles on the Science and Practice of Agriculture. Prof. N. is already so well known to our readers, that it is unnecessary for us to commend him for the sound, practical common sense which he brings to bear on this subject.

We embrace this opportunity to renew the expression of our hearty thanks to our numerous CORRESPONDENTS, in every section of the country, for their very liberal contributions to our pages, showing the results of their practice and observation, by which we have been enabled to garner up a storehouse of facts and suggestions of immense value to the farmer,—to our AGENTS, and POSTMASTERS generally, for their persevering and successful efforts to promote the circulation of our journal—efforts made too, in most instances, without other reward than that which arises from a consciousness of having done what they could to dissipate existing prejudices, by causing those whom they have induced to become subscribers, to READ, REFLECT, and ACT intelligently.

As the annual subscription of our work is too small to admit of our keeping accounts with individual subscribers, we are compelled to continue our practice of discontinuing all subscriptions at the end of the year; and hence the necessity of an annual appeal to the friends of "*The Cultivator*," to renew their efforts to promote its circulation We have prepared a PICTORIAL CULTIVATOR, containing more than ONE HUNDRED ENGRAVINGS, a copy of which will be sent to every subscriber to our next volume. We shall also send a copy of it, with this number, to each of our Agents,—believing that by its exhibition many will be induced to subscribe, in order to obtain this beautiful sheet, which is intended as a NEW-YEAR'S PRESENT for all our subscribers for 1850.

As an inducement to greater exertion on the part of those disposed to act as Agents, the following PREMIUMS will be paid, in Books, or in Implements or Seeds from the Albany Agricultural Warehouse, to those who send us the largest lists of subscribers for our next volume:

1. To the one who shall send us the largest number of subscribers to the CULTIVATOR for 1850, with the pay in advance, at the club price of 67 cents each, previous to the 20th of March next, the sum of FIFTY DOLLARS.
2. To the one sending us the next largest number, the sum of FORTY DOLLARS.
3. To the one sending us the next largest number, the sum of THIRTY DOLLARS.
4. For the next largest list, the sum of TWENTY DOLLARS.
5. For the next largest list, TEN DOLLARS.
6. For the FIVE next largest lists, each FIVE DOLLARS.
7. For the TEN next largest lists, each THREE DOLLARS
8. A copy of Thomas' "AMERICAN FRUIT CULTURIST," price one dollar—a very valuable work, just published—to every Agent who sends us Fifteen subscribers and $10, and who does not obtain one of the above prizes.

LUTHER TUCKER

National Board of Agriculture.

EDITORS OF THE CULTIVATOR—I recently prepared a paper for *The Cultivator*, upon the subject of the establishment, in the National Department of the Interior at Washington, of a Bureau of Agriculture, for the Promotion of the great interest of Agricultural Improvement, in this Union. I submitted my communication to the consideration of a few friends, who advised me to lay the matter before the Legislature of Vermont, now in session, for their approbation and recommendation to the General Government. I did so; I am happy to inform you that it met with universal favor. The paper has assumed the form of the following Report, which, together with the accompanying Resolutions, were passed by the General Assembly of Vermont, as you will see below. F. HOLBROOK. *Montpelier, Vt., Oct.* 18, 1849.

REPORT.

The founders of our government were desirous fot the organization of a Home Department, devoted to the fostering and encouragement of Agriculture, and other Industrial Arts; but it seems that for want of proper persons to organize and manage such a Department, it was laid aside.

At a later period, Washington recommended an organization, entitled "A Home Department of Agriculture." His conceptions upon this subject, —like everything else emanating from his practical far-seeing mind,—are exactly to the purpose, comprehending, more or less directly, about all that need be said in its favor. They are as follows:—

"It will not be doubted that with reference either to individual or national welfare, Agriculture is of primary importance. In proportion as nations advance in population, and other circumstances of maturity, this truth becomes more apparent, and renders the cultivation of the soil more and more *an object of public patronage*. Institutions for promoting it grow up, supported by the public purse, *and to what object can it be dedicated with greater propriety?* Among the means which have been employed to this end, none have been attended with greater success than the establishment of Boards, composed of proper characters, charged with collecting and diffusing information, and enabled by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to *a common centre*, the results every where, of individual skill and observation, and by *spreading them thence over the whole nation*. Experience has accordingly shown, that they are very cheap instruments of immense national benefits."

The methods of agriculture pursued by our fathers, in a new country, with a virgin soil and a sparse population, were, perhaps, necessarily rude and improvident; but with a rapid, and unprecedented increase of population, improvements in tillage have not advanced with corresponding steps, or generally speaking, been of long standing. By no more than a-half century of bad cultivation the soil of the older States has become either entirely run down or greatly impoverished of fertility; and insects, blights, noxous weeds, &c., the usual attendants of imperfect tillage, have increased and become accumulated to an alarming extent.

But the evil does not stop here. Too many of our intelligent, enterprising young men,—observing the sad condition of the soil, and trained to false impressions,—suppose that the agricultural profession, instead of being an open field for the efforts of science to improve, is but an arena, fit only to be occupied by the illiterate and unenterprising, under the guidance of blind tradition. They accordingly press in masses into other callings, filling them to overflowing, and leaving the "Art of Arts," to its fate.

The same process of deterioration which has been so nearly completed in the Atlantic States, is now going on at the West. Although nature, by a long and a most liberal process, has endowed the lands of that section with a fertility elsewhere unknown, still they can be impoverished by the hand of man. The gradation to the same climax which has obtained in the older States may be slower, yet, in the nature of things, it must be sure. Many of the occupants of those now generous soils, under the same mistaken impression that they are inexhaustible, which possessed the first settlers of the more fertile tracts of the Eastern States, will probably live long enough to find that, under a constantly depleting and careless husbandry, what has been done can be done again.—These remarks are of course subject to exceptions; but they are still quite too generally true.

While this rapid destruction of fertility has been going on among us, several of the States of Europe have been as rapidly advancing in productiveness. There, Agriculture is fostered and encouraged by Government; men of the first attainments, and in the highest walks of life, devote their time and talents to its improvement; the lights of several sciences have been shed upon it; lands, under the cultivation of ages previous, have been so changed within sixty or seventy years past, by a judicious rotation of crops, and a system of manuring adapted to the soil and the crop, as to increase threefold in productiveness; thousands of acres of wet lands, heretofore of little or no value, have been drained, and are now under profitable cultivation; agricultural schools and colleges have been established; and the breeding of agricultural animals has been carried to so high perfection in England and Scotland, that any other breeds in the known world may be improved by a cross with them.

It may be said that such high cultivation cannot be profitable here. Neither can we afford to pursue *our* exhausting system of cultivation much further; for the decreased and decreasing crops will not remunerate our labor. If the state of things in our country will not warrant high farming, to the extent to which it is now carried in the countries spoken of, we certainly are warranted in the employment of far more enlightened and correct principles of tillage than are now common.

It has been well said, that "a prosperous agricultural district is not without patriots to defend it;" and it is undoubtedly true, that a high state of intelligence and scientific knowledge among our farmers, would conduce, more than anything else, to the stability and perpetuity of our Republic, and to the rapid and full development of its vast agricultural capabilities. We may truly say, in this connection, that "every accession which man gains to his knowledge, is also an accession to his power; and extends the limits of his empire over the world which he inhabits."

About three-fourths of the population of our country are engaged in tilling the soil. Legislation to promote the prosperity of this interest, directly benefits the greater portion of the people; and indirectly, but not less surely, the remainder also. Now our legislators and others have not been wanting heretofore in eulogy upon the antiquity, digni ty, importance and pleasures of agriculture; but where has been that fostering care which would seek to encourage and promote it? Where have the farmers been who would demand for the cultivation of the soil, that conspicuous place to which it is so justly entitled?

But we are happy to observe that an improved sentiment is becoming prevalent. That "Agriculture *is of primary* importance;" that our nation has *already* "advanced in population and other circumstances of maturity," to that position which "renders the cultivation of the soil an object of public patronage;" that there is no "object to which it can be dedicated with greater propriety;" —these truths are gradually making their way into the minds of intelligent, thinking men.

We have, at length, a Home Department; and the question presents itself—Can it, and will it do anything for Agriculture? It can, and we trust that it will. The politicians *may* seek to make it an instrument for the furtherance of party; and with the bug-bear of constitutional objections, they *may* tell us that nothing can be done for Agriculture under this Department. But let the farmers, moving in a mass, call loudly for a Bureau of Agriculture, with proper and suitable patronage from the Government. Let it be managed by "proper characters," selected with reference to their fitness for, and devotion to promoting agriculture. They should be men above political contamination; and having a love of science for its own sake; and keeping constantly in view the one great object which they were placed there to promote, they would not be induced to give up to party what was meant for mankind.

A Board of Agriculture, thus "composed of proper characters, charged with collecting and diffusing information, and enabled by premiums and small pecuniary aid, to encourage and assist a spirit of discovery and improvement, by stimulating to enterprise and experiment, and by drawing to a common centre, the results, everywhere, of individual skill and observation, and by spreading them thence over the whole nation," would soon be found to be "a *very cheap* instrument of immense national benefits."

1. This Board might be in correspondence with scientific men in all parts of our country, and with Boards of Agriculture in all foreign countries,—thus drawing to a common centre, and from thence spreading broadcast over the land, all new facts and improvements of utility, all valuable suggestions, derived from the improvement and new lights of the various natural sciences which are intimately alled to Agriculture.

2. Proper premiums might perhaps be offered to stimulate ingenuity, in the invention and production the most valuable farm implements and machines; and by awarding to those which, upon proper test, were found best to answer a desired purpose, competition, and an ambition to excel, would be excited to the highest degree.

3. Persons in the employment of our government abroad, might be directed to collect and transmit to the Department, those new or improved seeds, fruits, plants, animals, implements, &c., which were deemed desirable. As it would be part of the business of this Board, to institute extensive inquiries into the utility of introducing, for cultivation among us, the various valuable productions of other countries; and as the great range of latitude, of soil and climate, which our country embraces, undoubtedly admits of cultivating the products of almost every other country; we may reasonably suppose that a proper effort, in this direction alone, would be attended with very important results.

4. Premiums might be offered for the most able essays and the most satisfactory experiments to elucidate vexed questions and undeveloped principles in Agriculture—if deemed proper and desirable.

5. Extensive inquiries might be instituted, into the habits of Insects troublesome to cultivation, and the best method to exterminate them, or prevent their ravages. As the nation "advances in population, and other circumstances of maturity," it becomes more and more an object, pecuniarily, with our cultivators, to raise many sorts of fruits, and tender plants, comparatively unimportant at an earlier period. Now it is a fair estimate that one-half the productions of man, of this description, go to feed the insect world. Indeed, of some sorts, in some seasons, they take the whole. The subject of Entomology is vast and inexhaustible; it requires such extensive, and yet particularly minute and often microscopic investigations, that the efforts of ordinary associations of men can avail but little. But it is believed that a National Board of Agriculture would have resources, peculiar to itself, that might effect important results. Its inquiries might be very extensive, drawing in contributions from individuals and societies, in every quarter, the sum total of which would be highly useful.

6. The various state and county societies throughout the land, might be in correspondence with the Department,—thus receiving and imparting information upon these and other subjects.

In short, in a hundred ways, such an organization might forward the great interests of Agriculture. Indeed, we may conclude, that no other establishment could parallel this, as a promoter of the interests, not exclusively of either section, but of the whole country.

The advocates for this movement may, by some, be called enthusiasts. They are so; for the magnitude and importance of the thing very properly awakens them to enthusiasm. It is right that our own State of Vermont should be a foremost, a zealous pioneer in this business. Our people are an agricultural people; and they are awake to those measures which will foster and promote this commanding interest. Other States will join us in endeavoring to form an organization so desirable; and thus the great sentiment of Washington, that "the power of the nation alone can carry out their high thought," will be realized.

1. *Resolved*, That the General Assembly of Vermont earnestly recommend the establishment of a Bureau of Agriculture, in the Department of the Interior at Washington, whose province it shall be to superintend and promote the great interest of Agricultural Improvement in the Nation.

2. *Resolved*, That the Governor is requested to transmit a copy of the foregoing Resolutions, and of the accompanying Report, to the President of the United States, to the Secretary of the Department of the Interior, to the Governor of each State of the Union, and to each of our Senators and Representatives in Congress, to the end that the attention of Congress, and of the several State Legislatures, may be properly invited to the propositions embraced therein.

3. *Resolved*, That the Senators and Representatives of this State, in the Congress of the United States, are hereby requested to use their influence to procure the necessary legislation, by Congress, for the speedy establishment, on a firm and permanent basis, of a Bureau of Agriculture, as suggested in the first foregoing Resolution.

Agricultural Notes.

Farming, &c., in Oneida County.

After the close of the Oneida County Fair, we had an opportunity of calling on several of the farmers and horticulturists of that section. We regret, however, that ill health rendered our examinations much less extensive than we had designed.

The settlement of this county was commenced about sixty years since, though the principal advance has been made since the beginning of the present century. Previous to the revolutionary war, it was chiefly a dense wilderness, where civilized man had no abiding place, except at a few fortified stations. Now, it has a population of about 100,000. This great change has taken place within the observation of many who still live to express their astonishment and admiration at what their eyes have witnessed.

By the kindness of Mr. E. B. Lucas, we were introduced to several gentlemen at Clinton. This neighborhood has long been noted for its apple-orchards. In fact, before the country came into the possession of the Whites, the Oneida tribe of Indians planted many trees in the neighborhood of their villages. We were informed by Ira S. Hitchcock Esq., of Oneida Castle, that these people had at one period upwards of 200 acres of land devoted to apple trees, and that the first settlers were in the habit of obtaining their apples and cider from the "Indian orchards." Rev. Mr. Kirkland, an early missionary among the Oneidas, planted a large orchard on the fine farm near Clinton, where he finally located himself. Many of the trees are still in a productive state.

The first settlers here, who came principally from the New-England states, soon discovered the favorable nature of the soil for the production of fruit, and propagated, extensively, the best varieties of apples and pears then known. Many years did not pass before the products of their orchards constituted an important part of the income of many farmers. The once celebrated "Goodsell orchard," has produced, we were told, upwards of $1000 worth of apples in a year. Mr. G. Butler, who is well acquainted with the apple-trade, states that 15,000 barrels of winter apples have been shipped from this place in one year.

The first orchards here were planted mostly on the alluvial lands along the Oriskany creek, and though they succeeded well, it has since been ascertained that the sides of the hills or ridges, where the subsoil is not surcharged with water, are as good for trees of all kinds as the alluvions. Not only apples and pears, but plums, peaches and grapes, flourish well here. Mr. Lucas showed us several kinds of peaches, one of which, a yellow-fleshed seedling, which originated in his garden, is a good variety, (pronounced so by all who have examined it,) and will probably come into extensive cultivation in this section. Mr. L. has a fine young orchard of pears, mostly on quince stocks, which appear healthy, and will doubtless soon give a good return for the attention bestowed on them.

Mr. George Parker is giving considerable attention to the culture of fruits. He showed us beautiful specimens of the Bartlett, and other choice varieties of the pear, very fine apples—the Sapson, (or Sops-of-Wine,) Baldwin, Hubbardston-Nonsuch, and others—and several kinds of grapes.

Mr. John C. Hastings has been actively engaged in horticulture for several years—has established a nursery here, and has been instrumental in disseminating a taste for the culture of fruits. For the purpose of testing varieties, he has had access to the fine garden and grounds of his father, Dr. Hastings, where he has fruited many new kinds of pears, apples, &c. In this garden he showed us a White Doyenne (Virgalieu) pear tree, the fruit from which, in 1847, sold for over fifty dollars. Mr. H. showed us a handsome specimen of Stevens' Genesee pear. It a large and good kind. He had, also, many esteemed varieties in various stages of ripeness. He has made many trials in cultivating different kinds of grapes, in the open air. He finds the Isabella and Catawba rather uncertain in ripening, without protection, though they bear abundantly, and the same may be said of several imported kinds. He has tried many of our northern native grapes, and has more kinds of these than we have before found in any collection. Some of them are decidedly good, particularly a variety called the Clinton grape. He received the first preminm at the last State Fair, for the best collection of native grapes. Mr. H. intends to raise vines from the seed of different kinds, in order to test the results of hybridization.

From Clinton, we went to Waterville, in the south part of Oneida county. This is a thriving place, and is becoming of considerable importance for its manufactures. We could not take particular notes in reference to the different branches of business; but by the politeness of Mr. S. J. Goodwin, were favored with a general view of the town and vicinity. Mr. G. is engaged in making woolen cloths. The factory—(that of Messrs. Bacon & Goodwin)—uses 120,000 lbs. of wool annually.

We called for a short time, on Mr Charles Palmer. We first took a glance at his fruit garden where he showed us many fine kinds of pears—several on quince stocks—and all in a healthy and flourishing condition. Here was also, a choice collection of plums. The varieties not out of season, were in great perfection, both as to appearance and quality. Several trees of Coe's Golden Drop were heavily loaded. A tree of the Blue Imperatrice made a splendid appearance, being filled to just the right degree with this beautiful late plum.

Mr. P. cultivates *hops* and *teazels* on a large scale. His average crop of the former is 16,000 lbs. The yield per acre is from 1,200 to 2,000 lbs. His crop the present year has been sold for 12½ cents per lb. There are several other hop-growers in this neighborhood. Mr. Gurdon Avery has 20 acres, and his crop was stated at 30,000 lbs. The labor of picking is performed chiefly by females, who are paid 25 cents per day, or one shilling per box. Several hundred hands are employed by the different growers during the "picking season," which lasts two or three weeks.

Mr. Palmer has 15 acres of teazels annually. They are all sold in Boston. His buildings and arrangements for curing the teazels, are ample and complete. The ground where the teazels are cultivated is made very rich by the application of large quantities of manure, which is obtained from several distilleries where many cattle and hogs are fattened. The teazels are planted in rows, which are alternately, about two and a-half and five feet apart. In the widest spaces, corn is planted in drills. The ground is kept perfectly clean with the cultivator and hand hoe. The corn yields from fifty to sixty bushels per acre.

The teazels require two seasons to come to maturity, and the principal object of the corn is to afford protection to the teazels during winter. The ears when ripe, are picked from the stalks, which have been previously topped, and the stalks are left standing. They break the force of the wind, so that the snow lies equally over the ground, affording a covering for the teazels, and protecting them against the fluctuations of temperature. The next spring, the stalks are cut down, carried from the field, and added to the manure heap. The teazels are cut the second year, about mid-summer. The stems and branches are then thrown into rows and burnt; and the ashes spread over the ground, which, after being thoroughly plowed is sowed to wheat, and often gives a yield of forty bushels to the acre. The grass which follows is usually very heavy. Mr. P. has gone over about forty acres in this way, and has brought it into a very high state of fertility and productiveness.

He cultivates several kinds of beans, some of which are grown among the teazels. We understood they were marketed in Boston, and ultimately sent out of the country.

Mr. P.'s business appears to be conducted with great regard to *system* and *neatness*, which ought to be recognized as the cardinal principles of farming in general.

From Waterville we passed over to Vernon. This is more particularly known as a grazing and dairying neighborhood, though the soil is in some instances well adapted to grain crops. Many of the farmers here have long been distinguished for their enterprise and success in various departments of husbandry, and a large proportion of the premiums of the State Agricultural Society are annually claimed from among them. Several of the officers and leading members of the county society reside here; and it is not too much to say, that among those who have prominently aided in bringing the county of Oneida to her present high position in respect to agricultural improvement, will be found the names of Hitchcock, Church, Marshall, Ingersol, Case, Wright, and others of this town.

Besides the interest taken in the state and county societies, the people of Vernon have a town organization, the object of which is the improvement of agriculture, horticulture, and domestic manufactures. An annual exhibition is held in the month of October. We were informed that there is generally on these occasions, a large turn-out of live stock, and a liberal display of the products of female labor.

Our first call here was at the residence of Gen. L. T. Marshall. His farm consists of 230 acres. He keeps thirty cows; the milk is devoted to making cheese, except such portion as is necessary for making the butter required for the family. The average weight of cheese per cow is 400 lbs., and it is sold, green, at $6 per hundred.

Gen. M. has an excellent stock of hogs. They were produced from various crosses; but having, some time since, obtained the points and qualities desired, he has kept them so without change. They are small-boned, but will weigh at sixteen to eighteen months old, 300 to 400 lbs. each, and will fatten at any age.

Gen. M. has commenced the culture of fruit, and has a fine collection of young trees of various kinds. He is also commencing the cultivation of teazels.

Mr. S. H. Church has 170 acres in his farm. He practices a mixed husbandry—has always raised more or less wheat, notwithstanding the casualties to which this crop has been exposed in this region, and has seldom failed of getting thirty bushels to the acre—once or twice as high as fifty bushels per acre. Barley has been considerably cultivated, and has yielded from forty to fifty bushels per acre—oats fifty bushels. His wheat sown the present autumn appears very promising. He attributes his success in wheat culture, to the thorough preparation of the soil, and sowing clean seed.

Mr. C. keeps 300 Saxon sheep. The reputation of this flock has long been deservedly high; and to this and the flock of S. B. Crocker, of Vernon, have been awarded many of the premiums on Saxon sheep by the State Agricultural Society. We believe Mr. Church took nearly all the first premiums in this class the present year. The flock shows evidence of skill and care in breeding and managment. The sheep appear healthy, of very uniform size and shape, and very superior quality of wool. The average weight of the fleeces for several years, has been two and three-fourths pounds, thoroughly washed. He has two years' clip on hand—that of 1847 sold for 68 cents per pound.

Mr. C.'s cattle are a cross of the Devon with the common stock—some being nearly full blood Devons. We have spoken of his oxen, exhibited at Syracuse. At Hampton we saw them tried at a cart, with a weight of over two tons, and their performance attracted the admiration of all. Without a touch of the whip, but merely by the word of the driver, they took the load up a steep hill, where the felloes of the wheels were nearly buried in the soft ground. They appeared to understand exactly how the work was to be done, and they performed it with resolution and courage.

Mr. C. C. Church has 193 acres of land. He devotes his farm mostly to grass—keeps 30 cows, and rears six or eight calves yearly. His cows are devoted chiefly to making cheese, and they average about 400 lbs. each. He has six full blood Devon cows and heifers, obtained from Mr. Hurlbut, of Connecticut. Some of them are fine specimens of that beautiful breed, and if bred to bulls of the proper quality, will, we venture to say, produce stock which will not suffer by any comparisons.

In Mr. C.'s garden we were pleased to find a handsome collection of various kinds of fruit: Sweet water, Isabella, and several good kinds of our native grapes; plums, pears and peaches. We were informed that most of the peach-trees were from seed planted by Mr. Church's mother—a lady now seventy years of age, still actively interested in all the improvements of the day. One of the trees produces a peach which is highly deserving of notice, being of a quality seldom equalled. The tree is now five years old, and has borne, more or less, two seasons. The seed was obtained from Baltimore. The fruit ripened this year, about the first of October. We hope Mr. C. will take measures to have it brought before our pomological associations another year.

Mr. Ira S. Hitchcock, of Oneida Castle, has a farm of 225 acres. The ancient village of the Oneida Indians covered a portion of this farm, and in one of Mr. H.'s fields, was the residence of the celebrated chief, Skenandoah. The soil, for the most part, may be called an old alluvion, lying on the banks of the Oneida creek. It is a friable loam, easily cultivated, and naturally good for grain crops. The Indians raised their best corn here, and the capacity of the soil for the production of that grain, is still shown by the large crops which Mr. H. annually obtains. A field of his containing nine acres appeared to be considerably the heaviest of any we have seen this season. Mr. H. told us that he generally had seventy-five bushels to the acre.

He has been in possession of the farm twelve years. When he bought it, it was generally thought to be "run out." It had been plowed about three to four inches deep. His first operation was to break up about forty acres of it, six to seven inches deep, which was sown to wheat, and yielded twenty-five bushels to the acre. Excepting for a few years when the crop has been injured by the midge, he has since obtained an average equal to this.

The means of improving the farm have not been extraordinary. The manure has been derived chiefly from the live-stock kept on it. Muck, from a peat bog, has been used for compost, and to absorb the liquids of the stables and barn-yards. The principal barn for stock has a cellar under the whole of it, into which the manure is thrown; and Mr. H. is satisfied that this is far the best and most economical mode of keeping stable manure. All the excrements, liquid and solid, are here saved, and may be kept without loss till wanted.

Besides the corn consumed on the farm, Mr. H. sold, last year, 500 bushels, and between 500 and 600 bushels of oats. The latter grain usually yields fifty bushels to the acre, and the price obtained at the barn, has for two or three years been forty cents per bushel. Corn is usually worth fifty cents per bushel, and wheat one dollar.

Mr. H. has this season commenced the manufacture of cheese. Thirty cows are kept on the farm. They will average 400 lbs. cheese each; which has been sold at a month old, at $6 per hundred. At this dairy, as well as most others we visited, the milk is heated by steam. A small boiler is used for generating the steam, which is conducted by pipes to the vats containing the milk. The milk is placed in tin vats, which are placed in wooden vats, so much larger than the tin ones as to leave a space of about two inches all round. This space is filled with water, and the steam is conducted into it. A boiler noticed in our October number, made by J. H. Bushnell, Utica, is thought by some to possess advantages over those in common use.

Mr. H. has made some observations in regard to the application and effect of animal manures, which are worthy of notice. He has spread it on the surface, and has plowed it in at various depths, for various crops. The conclusion to which he has come, is, that the more thoroughly it is mixed with the soil, the better. When it is first applied, therefore, he prefers burying it with a shallow furrow; and when the manure is rotted, or the next time the ground is plowed, run the plow to the usual depth—not less than seven inches. This mixes the manure with the whole of the soil that is stirred.

We hope at some future day to be able, under more favorable circumstances, to make a more thorough examination of the agriculture and resources of Oneida county. At present we can only tender our thanks to the officers of the Agricultural Society of the county, and various individuals, whose many favors will be long remembered.

Seeding Grass Lands.

Eds. Cultivator—I read in the October *Cultivator*, an article on "Seeding Grass Lands in Kentucky." As more *light* was asked upon the subject, I thought a few remarks would not be out of place. And first, seeding grass lands in Connecticut, and in Kentucky, may be two things, as very different treatment may be required in the two States. Second, it has been the practice, more or less, in this State, to seed down grass lands in the spring; with oats, barley or spring wheat, but more commonly with oats; and grass seed sown in this way generally takes well.

But there are some objections to this method of seeding. On lands that are intended for mowing, oats or barley will often grow very heavy; and before cutting time, much of the straw will lodge or lie down, and in this case the young grass is very apt to be killed out. Then, if a sudden and severe drouth set in early in the season, the grass very often proves a failure.

Of late years, we have been more inclined to fall seeding on winter grain, as more certain of a good *catch* for timothy and red-top. And I am not aware, even with our cold winters, that grass is in much danger of killing out, if it has once become well set. One advantage of fall seeding is, that you can mow a crop of grass the next season, after the grain crop comes off; sometime in the month of August. This is not often the case, when seeding is done in the spring. Winter grains, such as wheat or rye, very seldom lodge, if they stand ever so heavy on the ground, so that the young grass will not be injured in this way. This, probably, is owing to the length of time the stalk is growing, as the straw is stiffer, and has more *silica*, than those straws which have a rapid growth. Some farmers have had very good success in seeding to grass with buckwheat in the summer, which in some instances may do very well.

A very good plan is practiced in some parts of Massachusetts, where meadow lands are rather moist, and are intended to be kept in grass without other cropping. Sometime in the month of August, the ground is very nicely turned over with a plow, the ground rolled down, and, if to be had, a good dressing of compost is spread on; then the grass seed is sowed and harrowed in evenly with a fine-tooth harrow; the whole then to be made smooth with the roller. The next season, a fine crop of grass can be cut; and managed in this way, the land can be kept constantly in grass. I do not approve of the plan of sowing grass seed alone, without grain, unless it be in the way just mentioned, as in this case, there would no weeds spring up, from the inverted sward, to hinder the young grass coming to perfection. But to sow grass seed alone on mellow or stock ground, would be to just give up the land to weeds and foul grass at once. I think it altogether preferable to sow with some of the small grains.

As to the amount of seed to be sown on an acre, there can be no certain rule laid down. Generally, however, light dry soils need more seed than moist soils. Thick grass is of better and finer quality, than coarse and large, of the same kind. I have just now (Oct. 15,) seeded down about two acres with wheat, with a bushel of red top, and a half bushel of timothy seed, mixed together and sown in breadths of about six to eight feet to a cast, each way of the field, or at right angles. This is three pecks of seed on an acre, and if it have a good catch, it will give a good burden of grass next season, for mowing. Where land is in good heart, when it is laid down for mowing, enough clover will come in without sowing any. If the land is intended for pasture, it is a good plan, to sow clover on a light snow in March, as it generally takes well sown in this way. In harrowing in grain and grass seed we do not like bush or brush harrows for covering the seed, as they are apt to draw the ground into heaps, and leave the seed uneven. But the light triangular harrow, of the Geddes pattern, with thirty teeth, is just the thing for covering grain and grass seed; the surface to be afterwards made smooth with the roller.

When Mr. Sanders advises his Kentucky friend to avoid sowing red top, as being the worst of all the cultivated grasses, it is presumed he meant the advice for his own State, and so far it may be all very well, for aught we know. But in New England, red top grass is considered one of the best of all the cultivated grasses for farm stock. Timothy is a capital grass, and when mixed with red top, and a slight sprinkling of clover added, it is better for market than either red top or timothy alone.

As to fall plowing for spring crops, I am of the decided opinion of the writer in the *Louisville Journal*, that it is a great benefit on many soils, especially on old swards, and heavy loams or clay lands. Light clover swards may do as well to plow in the spring. Trench plowing as mentioned, is a very good operation, when well done, to mix and deepen the soil. But at the north, subsoil plowing is taking the lead, as by the latter operation, the subsoil is not brought to the surface, but only stirred up and left in the bottom of the furrow. L. DURAND. *Derby, Ct., Oct.* 20, 1849.

Importance of Reading and Study.

Though farmers may always find more or less time to devote to reading and study, winter is, more particularly, from the leisure it affords, the season for this purpose. The crops having now been secured and the various matters requiring constant attention, disposed of, the mind of the farmer is left free for the consideration of plans for future operation; and that he may act understandingly in forming such plans, it is essential that he should, in the outset, possess a thorough knowledge of the principles and general state of agriculture. The mediums through which this knowledge is to be acquired, are reading, conversation, and observation, aided by reflection and study.

We have frequently given our own views in regard to this subject, and though we might add "line upon line," we think we should not be able to show the important points in a more striking light than they are brought out in the following remarks of Hon. SAMUEL CHEEVER, in his address before the Agricultural Society of Saratoga County: EDS.

Unfortunately, the opinion has too long prevailed with us, that learning, that intellectual cultivation are unnecessary for the farmer; that to plow, to fence and to feed as our fathers did, is enough. If we see a farmer among us, and we do see many, who is ambitious to educate his son, to place him higher in community, he educates him to turn his back upon the farm, instead of turning his hands and his cultivated mind to it. But we have lived to see this deep-seated error, that education, that intellect are unnessary to the farmer, giving way to a more enlightened and correct public sentiment; and well may we be assured, that as education and intelligence go out upon our farms, will the farmer rise in his station. Intelligence—the cultivated mind, with pure morality, give rank, whenever and wherever found.

But rank alone is not all the farmer is to gain by intellectual cultivation.

The labors of state and county societies, aided by the exertions of many munificent and enlightened men among us, and the labors of scientific men, as well in this country as throughout Europe, have demonstrated the importance and even the necessity of *mind*, of *education*, of *science*, to the successful cultivation and management of our farms.

Still, with hundreds of favorable experiments and results before us, in support of this position, there are too many of our own class, who are daily telling us, that our agricultural books and our agricultural papers are not worth reading, and that agricultural science is a "*humbug.*" To such I can only say, if you do not look about you, and do not read, you are in great danger of being left behind.

True it is, books alone, without practical observation, would be slow to make a good farmer.

The professor of mathematics, directly from the schools, with all his books, would doubtless make a sorry figure in navigating the ship in a storm, and might receive useful lessons from the less educated ship-mate. But when the science of the mathematician is added to the practice of the sailor, the accomplished navigator is produced.

The practical farmer—boastingly calling himself so—may, if he has fallen upon a fertile spot, succeed for years, and get tolerable crops, by following in the old track, without the lights of science; and probably for the reason that he has accidentally hit upon the very course that science would indicate. But in a large portion of the long cultivated parts of our country, the fertility of the soil has been exhausted by those hereditary systems, if systems they may be called; and nothing but science and intelligence will produce restoration.

If the man without reading and without books, on finding his crops failing under a long and exhausted course, can be induced at all to seek improvement through experiment, he is as likely to make the wrong application as the right. He has seen his neighbor restore a field by the application of lime, and concludes his fields have the same disease, and must be cured by the same remedy. He lays out his money to make the experiment, and fails. Another neighbor has succeeded with plaster, and his money is again spent upon that, without success, and so he goes on exhausting the catalogue of manures and exhausting his purse until he gives up in despair, sells out to a *reading* farmer and goes to Wisconsin or Texas, where he can begin again, his exhausting process, upon a new and fertile spot. His reading successor examines his worn out soil or has it done for a few shillings, and finds it entirely exhausted and destitute of the essential element of *potash*. He applies a few bushels of ashes instead of lime, in which latter the soil already abounds, and his crops are soon doubled.

Instances similar to this, are occurring daily around us.

I place myself with the rest, when I say that no class of men in this country know so little of the business they follow as do our farmers.

The lawyer spends one-third of a life at his books, to fit himself to *enter* his profession, and then studies by day and night to understand his business and do his duty.

The divine is found spending all the days of an entire life at his books, to maintain his standing and discharge his duties.

The physician also enters his profession only through a long course of severe study, and then all his life, while a "*practical physician,*" spends every spare moment at his books, to see what the skill and experiments of others are doing.

The commercial man and the manufacturer, spend their time at their business and their talents in studying the course of trade and the state of the markets.

The artizan of every craft, after years of apprenticeship, spends his days at his work and his nights at his books, to learn and profit himself in the mysteries of his art, and to understand the price current of his wares.

But the farmer is thought by some, to be *born* with all the knowledge necessary for his calling, and that learning and science are matters for other folks to trouble themselves about; when in fact how little do we know even of good *practical* farming, to say nothing of *scientific*.

What do most of us know of the component parts of the soil we cultivate, in what they are deficient, and the cheapest and best means to supply such deficiencies? and what do we know of the elements in the manures we are constantly using? Still we go on blind-fold, applying and mixing the one with the other, sometimes with good effect, sometimes with bad, and sometimes with no effect at all.

What should we think of the man who should enter the laboratory of the chemist, and proceed to throw together his alkalies, his acids and his metals without any knowledge of their properties or of their affinities, and then tell us he expected certain results? We should expect to see him burn his fingers at least, if he did not get blown up; and yet the admixture of soil, the application of manures, and the cultivation of our crops, is a constant but enlarged chemical process.

Again, what, as a class, do we know of correct systems of breeding and improving farm stock? of the anatomy and physiology of animals? of their diseases and their proper treatment? Enlightened, *practical* agriculture, aided by the lights of science, is daily solving and settling many of these questions which are of much importance to us, but questions which, in our confidence that we know all, have never once occurred to many of us.

But thanks to the spirit of the times, the dark days of agriculture are passing away, and light is breaking upon it so clear, "that *he that runs may read,*" and he that does not read will be run away from.

The Horticultural Department.

CONDUCTED BY J. J. THOMAS.

Answers to Inquiries.

Is the Louise Bonne de Jersey as good on the pear as on the quince? Is the Spanish Chestnut hardy about Rochester? Is the apricot worth any thing as a market fruit in western New-York? *C. S. Herkimer Co., N. Y.*

The Louise Bonne de Jersey is unworthy of cultivation on pear stocks. On the quince it is greatly superior, and although scarcely of the highest quality, it is one of the most valuable of pears in consequence of its handsome, fair and fine fruit, and enormous productiveness.

The Spanish Chestnut, although hardy, does not ripen its fruit as far north as 43° lat. and for this reason is of little value here.

The Apricot succeeds finely in western New-York, when protected from the curculio, yielding crops about equal to most sorts of the plum. On a wet subsoil it does not flourish. It should be kept headed rather low, as the hot sun upon the trunk after severe winters, sometimes kills the bark and causes the death of the tree. It has not been much cultivated for market, but there is no doubt that with careful attention, it would prove very profitable, as it ripens some weeks before the early peaches, and most of early plums, and is showy, rich, and delicious.

What is a sufficient number of apples, pears, cherries, plums, peaches, nectarines, quinces, apricots, currants and gooseberries, to furnish an abundant supply for the home consumption of a family? *B. Harford Co., Md.*

No two persons would agree as to the number needed for this purpose. Throwing out of the estimate the difference in the size of families, and the still greater difference in their habits and profuseness, the number must be in a great measure governed by the age of the trees, the variation produced by unfavorable seasons, and more than all else by the cultivation given. The following may however, be taken as an approximation to an average, taking different circumstances into account, after the trees attain full bearing:

50 apple trees,
20 pear "
12 cherry "
10 plum "
25 peach "
5 quince "
8 apricot "
30 currant bushes,
15 gooseberry "

Most families find it convenient to dry considerable quantities of fruit, and whatever kinds are thus selected, must be in larger proportion than otherwise. Again, some are particularly partial to certain kinds, while others dislike them; as for instance the currant, which by some is placed at nearly the head of all fruits, and by others, far towards the bottom of the list. Again, apple trees, pears, &c. usually require many years to attain that size which gives us the largest crops, hence it may be advisable to set out a sufficient number, to give the requisite supply at a younger age. Besides this, some sorts, as the pear and apricot, are often liable to disease and death, and hence a larger number may be requisite to provide for this contingency. And above all, the kind of treatment the trees receive will exert a very great influence on the quantity (as well as the quality) of the fruit; a very few, with high, rich, clean, and mellow cultivation, often giving more than five times the number neglected and compelled to take care of themselves.

We have not included nectarines, as they require an unusual amount of protection from the curculio, and are only occasionally fine and well ripened.

What is the best mode of using charcoal as manure? I observe a great deal has been said in its favor. *B. Genesee Co., N. Y.*

Charcoal alone, is not very valuable as manure; but if it is placed so as to become mixed with the accumulation of privies, it forms one of the most fertilizing substances to be found. If chamber-ley is poured regularly upon a heap of charcoal dust, nearly the same result is effected. Charcoal possesses absorbent powers in a very high degree, and although perfectly inert of itself, it absorbs and renders inodorous, the most powerful of animal manures.

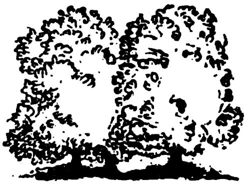
A Curiosity.

Eds. Cultivator—My attention was lately called by Mr. D. D. Brower, to four plums growing on one twig in his garden, two of the plums being good sized Columbias, and two as perfect well sized Green Gages. The trunk of the tree was of the wild red plum (P. americana.) Two grafts, one of the Columbia, the other of the Green Gage, had been inserted, and came in contact the space of an inch and a-half immediately above the place of insertion. The bearing twig came from the Columbia graft, some eighteen or twenty inches above the place of contact. Can this be accounted for on scientific principles, or must we regard it as a *Lusus naturæ.* R. Watkins. *Napoleon, Mich., Sept.* 12, 1849.

This, perhaps, cannot be accounted for on scientific or any other principles, and if no mistake has been made in the observations, it must stand as a fact by itself. It is true, that hybrids between two varieties of the same species (as of the two plums above mentioned) sometimes approach very near one parent or the other, but this result is not exhibited in the fruit which is the immediate result of the crossing, but only in the tree which grows from its seed. Otherwise, perhaps the above would not be so singular an occurrence. It will be observed that it is totally different from the impossible change which is sometimes claimed of one plant to another of a different species or even different genus.

Trimming Ornamental Trees.

Those who, with most praiseworthy enterprise, labor to embellish the country, as well as their own residences, by planting, very frequently commit a serious error in attempting to improve the natural forms of ornamental trees. Instead of pruning merely for the purpose of correcting a bad form of the heads without interfering with the varied grace of its outline, they copy as their models the practice of the farmer, who trims up his apple trees that he may plow beneath them, or of the herd of cattle, which strip off all the lower shoots to gratify their love of browsing. Fine specimens of elms and maples are sometimes seen in the natural landscape, whose stems have been rendered leafless by the animals which once fed beneath them, or whose lower branches have been smothered and destroyed by the shading influence of the surrounding forests where they formerly stood. These specimens are copied by the planter, without reflecting how much finer would be their appearance if they formed one mass of luxuriant foliage nearly down to the surface of the earth. In short, the practice has become quite common to trim up trees to a tall naked stem, merely because others have done it.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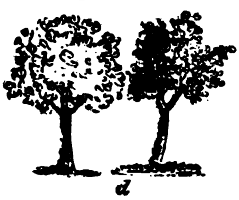
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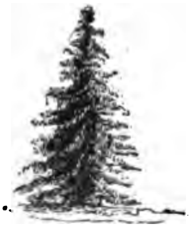
We have endeavored, in the annexed simple figures, to exhibit this error, and to show the superiority of low and fully developed forms, where (*c*) represents trees as true taste would form them, and (*d*) the too common style of sending up naked poles. Ornamental grounds are sometimes so thickly set with trees, that the eye can find no avenue for distant objects; and to remedy this inconvenience, the whole of them are suffered to stand, but a general slashing is made among the lower branches, and a vista is opened in various directions among the numerous tall and denuded stems. Incomparably better would be the appearance of such trees as in (*c*) with intervening lawns, through which the best distant views might be obtained.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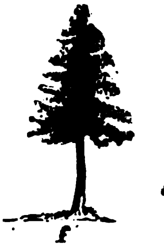
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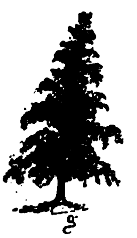
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The stems of trees or of tall shrubs are sometimes trimmed below, to admit the cultivation of smaller shrubs or herbaceous plants. A much finer effect is obtained by placing the smallest plants near the walk, to be succeeded by the taller species, as they gradually recede from it, the back ground being occupied by trees. The whole thus forms a rich mass of varied foliage, and when skilfully disposed, produces a magnificent effect.

Trees of regular or stiff outline, are made still more stiff and meagre by a naked stem, (*f*,) for this reason, such present a finer appearance when the lower branches rest directly upon the surface of the ground (*e*). But trees of a drooping habit, as the weeping willow, without a distinct and visible trunk, would be too straggling in growth. Hence, even the European Larch, (*g*) which although possessing a spiry or regular conical form, has quite drooping, smaller branches, may with great propriety, be allowed a short visible stem.

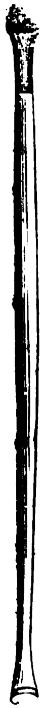
For these reasons, no kinds of roses should be propagated as *tree roses*, except those of a *drooping habit*.

Trimming Apple Orchards.

Farmers who own large orchards, usually find it convenient to prune during the mild weather of winter. There are few but have discovered that good and fair fruit is better grown, when the head of the tree is thinned enough to allow all parts a full chance. Small, smothered leaves, within a dense mass of brush, can never furnish a good supply of materials to the swelling fruit. Hence, evenly distributed and thrifty shoots, forming a well balanced and handsome head, must be the aim of every orchardist.

Many discover, after years of neglect, that their trees have become dense, matted, and scrubby; and to remedy the defect, the saw and axe are unsparingly applied, and large limbs are at once lopped, and the trees left naked and disfigured. The wounds, being large, must be covered with a water-proof composition, and a long time is required for their healing.

A better way is to begin early, while the trees are yet comparatively young, and on the first appearance of crooked and thick-growing shoots, to cut them out with a knife or chisel. This, if repeated each winter where it appears to be needed, will preserve the trees in good form and condition, so far as pruning is concerned. Even where the trees have become old and need much pruning, it is decidedly better to accomplish the desired thinning gradually in successive years, by a sparing and evenly distributed pruning, than to cut in heavily at once. In all instances, the cutting of very large limbs should be, if practicable, avoided.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Some of the best orchardists in the country never allow a heavier tool to be used in their orchards than the knife and chisel. The latter, for cutting expeditiously such branches as may be at a considerable height from the ground, avoiding at the same time the trouble of handling ladders, and the bruises and injuries to the bark, caused by ascending the tree, may be placed on the end of a pole (fig. 98,) a blow of a mallet at the lower end of which, will quickly separate closely and smoothly to the tree, any limb an inch and a-half in diameter.

While the importance of pruning is not to be forgotten, the indispensible necessity of manuring and rich and clean cultivation must be constantly borne in mind. A fertile soil and vigorous growth may to a great extent compensate for other neglect; but no cutting nor forming of the branches can impart life to a tree which is languishing in a hard, sterile, and neglected soil, overgrown with grass and weeds.

The Utility of Leaves.

Every person conversant with vegetable physiology is aware that the all important requisite in the growth of fine fruit, is a good supply of large, vigorous healthy leaves. A tree which is kept defoliated for a single season, must die; and fruit growing upon branches which are deprived of their leaves, cannot ripen—examples of which are furnished by the instant cessation in growth and ripening of fruit upon trees which become stripped by leaf-blight. In one instance, a dense crop of plums remained half grown and flavorless for several weeks, in consequence of the premature dropping of the foliage—a second crop of leaves three weeks afterwards, effected the completion of their growth, and their ripening to honied richness. The editor of the *Michigan Farmer*, mentions the following interesting case, in illustration of the same principle. "B. B. Moore, Esq., of Detroit, has a magnificent grape vine, spreading itself over one side of his house, which is at this time [Sept.] richly laden with fruit. After the clusters were formed, a cow entering the enclosure, ate off the leaves entirely, within her reach, but left the fruit unmolested. The consequence is, that upon the portion of the vine which was beyond the reach of the animal, (which constitutes the most of it,) never were finer clusters developed, while upon the small portion from which the leaves were removed, the clusters dwindled away, and have come to nothing, and that too up to the very line of separation between the mutilated and unmutilated portion."

Culture of Fruit.

I am a new subscriber to *The Cultivator*, and wish to know the most proper time for pruning, budding and transplanting the apple, pear, peach, plum and quince—also, the grape vine—with a catalogue of some of the best varieties of each. *O. H. W. Quaker Springs, Ga., Sept.* 1849.

The best time for transplanting is while the ground is in good condition for working, and between the period when the tree has ceased growing in autumn, and before the leaves burst in spring. In severe climates, tender kinds are most safely removed in the spring. In autumn, the work need not be delayed till the leaves fall, but they should be stripped off at the time of removal. Peach trees may be safely set out even as late as in blossom, and when the leaves are opening, if the young shoots are shortened back three quarters of their growth all over the tree; for this lightening of the head, lessens the draft on the roots, and the peach, possessing quick re-producing powers, soon sends out new shoots.

Pruning may be done in winter, or in the early part of summer. At the latter season, the new wounds made by cutting off small shoots, quickly heal over.

Budding is performed only while the stock is in a rapidly growing state, or before its growth has ceased—the bark must peel freely. But the work must not be done too soon, or before the inserted buds have become sufficiently matured. Some experience is necessary to enable any one to determine precisely, the most successful period. The bark of the plum peels less freely than most other trees, and if hardened buds can be had, it must be done early, or while growing most rapidly—other fruit trees may be budded when the growth begins to diminish in rapidity.

The grape is usually pruned late in autumn, and hardy sorts in winter.

A few of the best varieties of fruit for the South, are the following:—

Apples.—Early Harvest, Sweet Bough, Gravenstein, Fall Pippin, Yellow Bellflower, Swaar, Rhode Island Greening, Red Canada, Pryor's Red, Rawle's Jannet.

Pears.—Tyson, Washington, Seckel, Bartlett, Gray Doyenne, Louise Bonne of Jersey (on quince,) Dearborn's Seedling, Bilboa, Flemish Beauty, Paradise d' Automne, Beurre d' Aremberg.

Peaches.—Tillotson, Serrate Early York, Grosse Mignonne, Oldmixon Free, Large Early York, Early Crawford, Crawford's Late, Ward's Late Free, Heath Cling, Druid Hill.

Plums.—Washington, Green Gage, Jefferson, Lawrence's Favorite, Purple Favorite, Purple Gage, Coe's Golden Drop, Red Diaper.

Grapes—hardy open air,—Isabella, Catawba, Bland, Lenoir, Ohio. For grape house, Black Hamburgh, White Muscat of Alexandria, Royal Muscadine.

Quince.—Orange or apple quince. This varies much in form, from different seedlings, some being nearly round, others pear-shaped; and even on the same bush in different seasons, we have seen all grades of form from nearly spherical to that of a Capiaumont pear.

For further information, we must refer our correspondent to the books on this subject.

Laying Plans for Work.

The comparatively leisure season of winter, affords a peculiar opportunity for the cultivator of fruit to look over his practice and system of culture, and see where he may not introduce material improvements.

In the first place, every land owner may ask himself the question,—Have I trees enough planted? Cannot I get a heavier or more profitable return from my land, by extending my orchard, or improving the character of its products?

Many farmers have lately discovered that ten acres of orchard afford them more than 200 acres in corn, wheat, potatoes and grass. One hundred to five hundred dollars per acre are not unusual, where unusual pains have been taken to get the very best sorts. Are we not losing by delay? Remember, a market in Europe is beginning to open for fine apples and pears. Even the owner of a single square rod in a village, has gathered several bushels of grapes from a single vine in one year.

Have those about to plant selected the best ground? Remember that in most localities hills or elevated grounds are better than low and frosty valleys—tender fruits may bear well in the former, and be cut off in the latter—and that however dry the surface, a wet subsoil is very bad for all tender fruit trees.

Let every person who has or expects to have a fine fruit garden, remember that a peculiar sin of vagrant boys is fruit stealing—that the circle of idle village boys' rambles has a radius of at least a mile and a-half—and that a terrific hedge of osage orange is a more quiet and secure protection than spring guns, emetic-tartar, or bull-dogs. Let the hedge and fruit-trees advance in growth together.

Has the soil for receiving the young orchards been sufficiently prepared? Subsoiled? Trench-plowed? Deeply intermixed with manure and tempered with ashes? This labor may quadruple the crop in five years, and improve its quality beyond any scale of measurement.

Is the new fruit-garden laid out to admit the future fencing off of the smooth stone-fruit, for enclosing pigs and geese? Remember that these animals are the great destroyers of the curculio, and will eminently assist all other remedies.

Have the most delicious sorts been selected? A Doyenne or Tyson pear, a Black Eagle or Downton cherry, grow as freely in a rich soil and a free air, as the most austere and repulsive wildings. Have the most productive for market been chosen? Ten trees of the Baldwin and Rhode Island Greening will yield more than fifty trees of some other sorts. One square rod of the Cincinnati Hudson strawberry, will sooner fill a half-bushel basket, than twenty rods of the British Queen or Myatt's Eliza.

Care in these particulars will give us a great addition to rural comforts. But while the palate is gratified, do not forget another and higher kind of taste, through the eye, gratified by ornamental and shade trees around the dwelling. These have another use,—sheltering from severe winds. A friend whose house is well surrounded by evergreen trees, thinks he saves several cords of fuel in this way in each year. Still another motive should induce ornamental planting. Adding to the comforts and attractions of home, is a strong inducement to prevent boys and young men from seeking amusement at the tavern and grog-shop.

Evergreens for ornamenting grounds about dwellings are well removed in winter, by carrying with the roots a large cake of earth, whether frozen or unfrozen, (the latter is easiest,) which will almost insure the certainty of their growth.

Hints for the Season.

Prune orchards—trim hardy grapes—cut grafts, they may be very easily and safely preserved in a large box of damp moss, or buried wholly in earth, protected from contact with it by enclosing in a box open below. Young trees which have not been banked round the stem, should have the snow trodden round them, to guard against mice. Caterpillar's eggs may be now cut from the young shoots in orchards. Marking-labels may be made, stakes for stiffening newly transplanted trees, and boxes set with glass, for covering early vegetables. Trees sent long distances late in autumn, are sometimes received frozen, in which case the packing should be immediately removed, and the roots before thawing buried in the earth. A tree frozen out of ground will escape injury if thawed beneath the soil; but if thawed while exposed to the air, it will perish.

Market Apples.

Mr. Editor—Will you please name what you consider the best 20 or 25 sorts of market apples with you—planted *solely for profit*—in which of course the vigor and productiveness of the trees must rank among the most important characteristics. Let them be divided as to season about as follows:—6 early, 4 or 6 fall, and ten or 12 winter variety, and mostly long keeping.
F. K. Phœnix. *Delevan, Wisconsin, Oct.* 2, 1849.

Handsome, fair, and productive sorts, constitute at present the most popular for market; quality is usually a secondary consideration. But with the rapidly increasing knowledge of fruits of delicious flavor, as they become disseminated through the country, external appearance alone will not in future be regarded as all-essential. For this reason some are included in the following list, of very high flavor, which are not so fair and productive as others of second quality. The sorts here named are such as have been tested in different regions—there may be a few new varieties which future trial may prove of equal value.

Summer Fruit—Early Harvest, Red Astrachan, Early Strawberry, Williams' Favorite, Bough, Golden Sweet.

Autumn Fruit—Late Strawberry, Gravenstein, Porter, Lowell, Haskell Sweet.

Winter Fruit—Hubbardston Nonsuch, Belmont, (or Waxen,) Peck's Pleasant, for Early Winter—and Baldwin, Red Canada, Jonathan, Swaar, Rhode Island Greening, Roxbury Russet, Esopus Spitzenburgh, Northern Spy, Newtown Pippin, with high rich culture for the last two named.

Peaches at the South.

M. W. Phillips, of Edwards, Miss., gives the following list of peaches, known at the north, with their times of ripening on his grounds. They are taken from some seventy sorts, as being first-rate in quality. The list is condensed from the *Southern Cultivator*.

June 6, Early Tillotson, Serrate Early York
12, Red Rareripe, Cooledge's Favorite.
19, George the Fourth.
20, Hoffman's Favorite, White Imperial, Crawford's Early, Poll's Melocoton.
June 25, Smooth-leaved Royal George.
July 2, Walter's Early.
5, Oldmixon Cling.
12, Large White Cling, Red Cheek Melocoton, Lemon Cling.
13, Brevoort's Morris, Bergen's Yellow, Crawford's Late, Columbia.
20, Druid Hill.
28, Monstrous Pavie.
Sept. 1, Smock Free (best of its season.)

S. W. Montgomery, of Hinds Co., Miss., furnishes a list with the times of ripening, from which the following are selected; all are of fine quality but the first.

May 28, White Nutmeg, (worthless.)
June 4, Early Tillotson.
6, Serrate Early York.
12, Burgess' Beauty.
15, Cole's Early Red, (good.)
18, White Imperial.
20, Crawford's Early, Malta
July 2, Walter's Early.
8, Large White Cling.
12, Red Cheek Melocoton.
18, Druid Hill.
28, Monstrous Pavie.

Coloring Blue.—An exchange gives the following directions for a simple blue dye, ready for use at all times: "Put one ounce of pulverized indigo into three ounces of oil of vitriol. The bottle should not be more than one-third full, as it sometimes ferments. Let it stand at least two weeks, the older the better. Shake it well once a day for a week or more; if too thick, add water. This mixture, with warm water and alum, will color any shade of blue in five minutes."

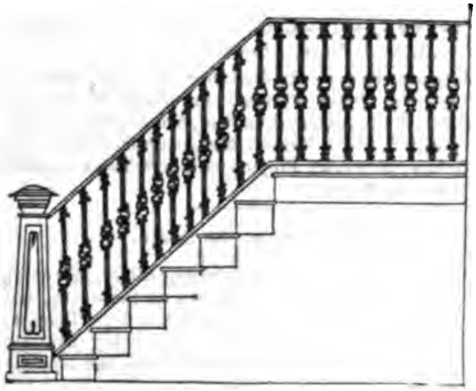
Consumption of Timber.—Sinclair, in his Code of Agriculture, states that a 74 gun ship requires 3,000 loads of wood, the produce of 50 acres of heavily timbered land.

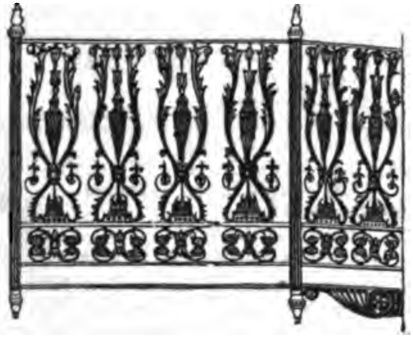
☞ To cause an abundance of grass, is the foundation of all good husbandry, and should be the first and last object of every one who desires to be a successful and prosperous farmer.

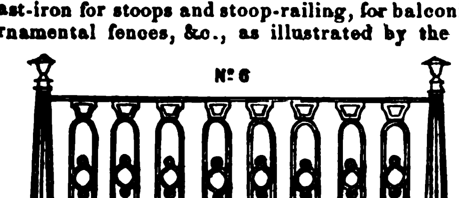
The Farmer's Note-Book.

Cast-Iron Railings, &c.

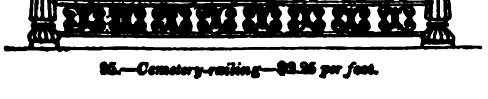
Among the improvements of the day, the adaptation of iron to various purposes, is quite conspicuous. Not only has the use of this metal been greatly extended, by being applied to a greater variety of objects, but it has been made to assume forms much more tasteful and ornamental than formerly.


92—Stoop-railing—$25.


93—Balcony-railing—$2.50 per foot.


94—Cemetery-railing—$2.50 per foot.

A good example of this is afforded in the use of cast-iron for stoops and stoop-railing, for balconies, ornamental fences, &c., as illustrated by the accompanying cuts. The various articles represented are manufactured by Messrs. Starks & Pruyn, corner of Pruyn and Liberty streets, Albany, who also manufacture a great variety of similar articles. some of which are sold at prices much lower than those here described. Persons wishing to obtain any thing in this line, would do well to call at their establishment.



95.—Cemetery-railing—$2.25 per foot.

Characteristics of the Season 1849.

The season just gone by, will probably be chiefly remembered, in this country, on account of the visitation of the *cholera*, that mysterious pestilence, which, with more or less mortality, passed over our principal cities and towns, and the melancholy records of whose ravages have been made public through the appropriate channels.

In a meteorological view, the summer of 1849 was particularly distinguished for the prevalence of a severe drouth, and the remarkable absence of thunder and lightning, throughout the northern and eastern states. Over a large portion of New-York and New England, there was no rain to benefit vegetation from the 15th of June to the 6th of August; and in the central and western parts of New-York, the ground did not become fairly soaked till the 1st of October, though there were previously light rains which afforded some benefit to corn and other crops.

Hay, was generally good, as to quantity, except in the northern sections of the country, where it was cut off by the drouth.

Wheat, as to yield, was very variable, taking the country together. So far as we hear, the sections devoted to this grain to the eastward of the Allegany mountains, have turned out their usual quantity, and the same may be said of New-York, the northern parts of Ohio, Indiana, Illinois, and the greater portion of Michigan and Wisconsin.—Throughout a great extent of country to the south-west, the crop was injured by rust. In some districts it was also injured by the wheat-midge.

Rye yielded well. This grain is now raised in the eastern part of New-York, and to a considerable extent in Vermont, Massachusetts and Connecticut, on lands which formerly produced good wheat—the cultivation of the latter having been discontinued, principally on account of the attacks of the wheat-midge, from which insect rye is not materially injured.

Barley was injured by drouth, and the yield cut off; but to what per cent., we have no means of estimating.

Oats, in the eastern and south-eastern parts of New-York, were much injured by drouth, and in some instances nearly destroyed. The grain is also of much less than average weight. In the northern part of the state, and in the Canadas, where the crop is always sown later in the season, we learn that it so far recovered, after the rains, as to give a fair yield, in some instances.

Indian Corn has been greatly reduced in yield, in the sections above mentioned as having been visited by drouth. In the great corn region of the south-west, embracing the southern parts of Ohio, Indiana, Illinois, western Virginia, Kentucky, Tennessee, and Missouri, we are informed that the yield is very heavy. In New-York and New-England, the yield will fall below an average. We hear of but few *large* crops, and they are in locations particularly favored in respect to moisture. In most instances, the yield is represented to have been lessened by drouth from twenty to forty per cent.

Potatoes have generally given but a light yield

The deficiency is owing to drouth, and not to the prevalence of the disease, which for several years has been so destructive to this crop. Of this malady, the cause of which has so long furnished a fertile subject of speculation, we have heard but little the past season, either in this country or from Europe. Enough of it, however, has appeared on both continents, to show that it is not yet extinct. Whether it is to return in future years, we can form no reasonable conjecture. In regard to remedies or means of prevention, we have nothing new to offer.

Dairy products have been lessened in quantity by the drouth. In some instances, we have heard the amount of butter and cheese estimated at twenty-five per cent. less than a common average. From the general extension of the business, however, it is supposed that the whole quantity brought into market, will be at least equal to that of any previous year.

Fruits in general, have, with other crops, experienced the effects of protracted drouth. Apples are scarce. In some districts, the fruit set well, but became stunted from lack of moisture, apparently, and is comparatively of a diminutive size. The high price in market indicates the deficiency of the crop. Pears are not as plenty, nor of as good size as usual. The *blight* of the tree has been less prevalent in this vicinity, than in some former years. Plums may be said to be the only fruit of which there was an abundance in this vicinity. Of this crop, we had none in 1848, and from the trees thus having a year of rest, their capacity for production was probably increased; and hence they bore excessively the past season—many trees, where attention was not given to lighten the burden, having been broken down. There were more peaches in the northern sections of the country, than are usually obtained; though they are never found here in large quantities.

The weather during autumn has been mild. A frost occurred on the morning of the third of September, but not of sufficient severity to do injury, except in particular situations; where corn, potatoes, beans, &c., were nipped. There was no general frost to affect vegetation, till the first of October, and even up to the first of November, it was only on a few mornings, that frost was visible at all. Many of our gardens presented a freshness of foliage in the middle of October, which in ordinary seasons is not met with later than the middle of September. This was partly owing to the renewed energies of vegetation from the effects of rain, after the partial dormancy occasioned by drouth. The The same effect was visible in the greenness of pastures and grass-fields, which in the eastern part of New-York and parts of New-England, were well covered with verdure, from about the middle of August to the close of the season. Copious and extensive rains fell during the month of October, replenishing the streams and fountains, which had been lower than for many previous years.

Crops in Europe are represented as generally good. In Great Britain, the grain harvest is said to be bountiful.

Black-Sea Wheat.

Eds. Cultivator—In an article on "Farming in Missouri," in your October No., the writer, Mr. Hammond, speaks of the failure of the wheat crop in his section, by rust, winter-killing, &c. It occurred to me that if the farmers there had our variety of the Black Sea wheat, and should adopt our practice of spring sowing, these difficulties might in a good degree be avoided. The Black Sea wheat is sown any time from the tenth of March to the tenth of June, and from its doing well under these circumstances, I am led to conclude it would flourish in a more southern latitude. It yields in Vermont, in good soil, as high as 30 to 40 bushels per acre, and weighs 64 lbs. to the bushel. Jonathan Wainwright, of this town, in 1846, raised 30 acres, which I was credibly informed yielded 30 bushels to the acre, of the above weight. This, however, was not done on the "skinning process," but by a liberal application of ashes and stable manure, and thorough preparation of the ground. Elisha Fuller. *Middlebury, Vt., Oct.* 22, 1849.

Yield of Butter.

Eds. Cultivator—Having lately prepared a report on Dairy Products for the present year, in the county of Essex, Mass., I abstract therefrom the following facts, which may afford some data for the comparison of the products of this northern region with other more favored climes. The time of the production of the butter was nearly, in each case, from the 24th of May, to the 24th of September, 124 days.

Claimant.	Residence.	No. of Cows.	Amt in lbs.	Daily av. per cow
John Stone,.....	Marblehead,	4	630	1.25
Daniel Putnam,.	Danvers, ...	6	744	.94
Elijah Pope,....	do ...	4	434	.87
Chas. P. Preston,	do ...	8	796	.88
George Pearson,	Saugus, ...	6	652	.95
Nath'l. Felton,..	Danvers, ...	8	864	.98
Jonathan Berry,	Middleton,..	8	790	.88
D. McNaughton,	Newberry,..	5	490	.75
John Preston,...	Danvers, ...	4	366	.84
N. D. Hawks, ..	Lynnfield, ..	4	340	.75
		57	6106 lbs	

Being an average product of about seven-eighths of a pound per cow, daily through the season; and about one pound daily per cow through the month of June. All these cows, except two belonging to Mr. Pearson, were "natives." Those of the first-named claimant, Mr. Stone, were all of one stock. The mother of them, five years since, afforded 16¼ lbs. in a week. This has a tendency to prove that "like produces like." They are without horns. The feed of the cows was generally common pasture. When the drouth came on in August, they were supplied with green corn and corn stalks. If these facts are thought worthy of your notice, I am happy to communicate them for your excellent Journal. John W. Proctor. *Danvers, Oct.* 25.

Fat in Animals.

Much has been said in regard to the importance of the oily principle in the food of animals designed to be fattened; the idea being entertained by some that the fat is derived wholly from that source. We have always thought the theory was carried farther than facts would warrant; because it does not appear that animals fatten in proportion to the oil contained in their food; and because, when animals are kept on exactly the same kinds and quantities of food, they do not secrete equal quantities of fat. If a Berkshire pig and a Chinese pig are fed precisely alike, the one makes chiefly lean meat and the other fat; and there is the same difference in some kinds of cattle.

We learn from the London *Farmer's Magazine*, that the French chemist, Boussingault, has lately made some experiments in relation to this subject, the results of which are worthy of note. Eds.

Boussingault fed a number of pigeons on lard, another lot on the white of an egg, and another on starch, and a fourth he deprived of food altogether. The results were briefly as follows:—

	Fed with	Proportion of Fat in their Blood.
Pigeons 3 weeks old	1. Starch......	.0021
	2. White of egg	.0056
	3. Nothing	.0043
Pigeons 4 weeks old	1. Starch......	.0046
	2. White of egg	.0055
	3. Lard	.0065
	4. Nothing	.0070
Ducks,............	1. Starch......	.0042
	2. White of egg	.0044
	3. Nuts	.0049
	4. Nothing	.0034

From this experiment Boussingault draws the following conclusions:—

1st. In opposition to previous opinion, that the fat in the blood cannot be increased by fat in the food.

2d. The proportion only varies between about 4-1000 to 5-1000; and

3d. That the fat in the blood is in no case derived immediately from fat in the food, because those animals which received no food at all had as much fat in their blood as those which were fed on hog's lard.

So far, these experiments seem satisfactory; and when coupled with the fact that the food of our fattening animals—as potatoes, turneps, and such like—contain fatty substances in almost infinitesimal proportions, we may consider the non-importance of these substances (about which so much has been said and written) as almost established.

Natural Grasses.

In the extreme scarcity and exorbitant price of Herd's grass seed, the introduction of any substitute, combining its valuable qualities, is highly desirable. I have heard it asserted by those who profess to speak from experience, that Red Top is well adapted to laying down upland dry meadows, and pastures of light sand or of gravelly soil. I know it to be equal, if not superior to Herd's grass (Timothy,) for forming a permanent ley in low and moist grounds. It produces, I consider, a more tenacious sward, more enduring, and less liable to be affected by the changes and severities of our climate, whilst the hay it affords often exceeds the Herd's grass, both in quantity and quality. The usually received opinions of the nature and habits of the Red Top, have led us to suppose that it is congenial to, and will only flourish in deep, rich, and moist soils, and that it is not calculated for other situations. If the idea is correct, that this grass is adapted to the soils of a light and sandy character, it presents a most important fact, that should be generally promulgated.

A natural grass, uniting many important and desirable properties, occurs in this region upon, and in the vicinity of low marshy grounds. It generally selects a soil warmer than the natural marsh, frequently exhibiting itself along the line of earth thrown up in ditching of low lands. If susceptible of general cultivation, I would esteem it an acquisition of high consequence. I have recently observed that it appears gradually to insinuate itself more extensively among the wild grasses and brakes of our marsh meadows. I have not determined its botanical name; but in the popular nomenclature, it is designated the Blue Joint,—analogous in name only, I apprehend, to the Blue Grass, so celebrated in Kentucky. When growing, it presents a most beautiful spectacle; its matted masses waving in rich verdure and brilliant luxuriance. It forms a hollow stalk, often reaching, on favorable positions, eight and nine feet in height, bearing a series of broad linear leaves, with continuous sheaths enclosing the entire stem, which is surmounted by a heavy peduncle, presenting, when ripe, the appearance in shape and colour of a fox's tail. The foliage is excessively thick and heavy, and the plant usually occurring in clusters, so vigorous and mingled as to be almost impenetrable to the smaller animals. The growth and yield of fodder far surpasses that of any grass within my knowledge. Every description of stock feed on it with avidity; and I am not aware but that it possesses equally nutritive qualities with the cultivated grasses.

Is any reader of the Cultivator familiar with this grass? Is it adapted to cultivation, or has any effort been made towards its introduction into artificial culture?

The writer of this article has for several seasons been attracted by the appearance, and observed the habits of this plant with much interest, until the conviction has been formed, that it is susceptible of cultivation, and capable of taking a high rank among our improved grasses. W. C. W. *Port Kent, N. Y., November*, 1849.

Variety of Corn.

Eds. Cultivator—The intention of this brief communication is simply to remove an erroneous impression entertained by many of the readers of the Cultivator, and more fully expressed, in a short notice of the merits of the south Oregon corn, in one of the spring numbers of the Cultivator. I mean, that of its not being early enough for the northern states, and of its belonging to the "dent" class of southern corn. True, it grows finely south, and likewise west; and is cultivated with admirable success in Ohio, as I am informed. I did not, as you are aware, make any reply to those doubts,—not deeming it absolutely necessary at the time; but can now, with a certainty, recommend this variety of Indian corn, as being in every essential point preferable to any of the northern varieties raised for market, coming under my observation, many of which I have known tested. And in point of shelling, the Oregon corn will give a yield of six bushels per barrel of shelled corn; and no northern corn can ever come up to this. I have no doubt it will suit your climate admirably well, judging from its prolific yield in Maryland, and the high estimation it possesses in Ohio.

The present year, I have been more particular as to planting and gathering this corn. I planted about six acres the 25th of April, the land not having recovered from the severe cold of the middle of that month; the six acres were set with a peach and apple orchard eight years old. This land was manured two years past, broadcast, and has been cultivated every year since,—the present year in corn, as stated above. The first week in October, I gathered the corn, it being sufficiently dry to go to mill notwithstanding the disadvantage of the shade of the trees, now full of leaves. From this lot, I have housed more than double the quantity of corn taken off the same land before, even without the trees, in the last sixteen years; and I think I might have taken the corn off the 15th of September, with perfect safety. This corn is large, heavy, and of a beautiful orange yellow. A. G. MOODY. *Smithfield, Isle of Wight county, Va., Oct.* 21, 1849.

It should be remembered that in a large portion of the northern and New-England states, corn cannot usually be planted till the 20th to the last of May—at least a month later than the time mentioned by Mr. Moody, 25th of April; and it is important that the crop be well out of the way of frost early in September. ED.

Extracts from Agricultural Addresses.

IMPROVEMENT OF DAIRY STOCK.—Mr. EAMES, in an address before the Jefferson County Ag. Society, says—We deem it an easy matter to add twenty-five per cent. to the daries of this county, clear of all expenditure of time and money, by improving the quality of the cows. It is believed that there is no dairy in the country, consisting of ten cows or more, which does not show a difference of one-third in the yield of milk from the best to the poorest cow in the yard, yet the same amount of food is consumed by the poorest as by the best. Now to keep an inferior cow through the long winters of this Northern region with the prospect of only obtaining a two-thirds yield in the summer, we hold to be the most miserable policy in the world; it is a sufficient deduction in any case, from the gross income of the dairy, to feed and properly tend upon the best cow we can raise or buy.

INFLUENCE OF AGRICULTURAL SOCIETIES.—Judge CHEEVER, in his late address, makes the following observations:

Happy indeed would have been those men, since gone to their final rest, who, 17 years ago, met at Albany to lay the foundation of a State Agricultural Society, could they have forseen that in so short a time such wide-spread and valuable results would follow their magnanimous and well-directed beginnings. And happy indeed *are* their associates, who have been spared to this day, to see, as part of the result of their labor, the holding of annual Fairs in a large majority of all the counties of this state, and the holding of a grand State Fair, which annually brings together, from all parts of the State, from all parts of the United States and the neighboring provinces, more people, embodying more effective enterprise and moral worth, than has been or can be brought together on any other occasion or for any other purpose.

These meetings are not held for mere past-time, nor to further the plans of political aspirants, or secure the ascendency of one political division over another, but for the *substantial improvement of the condition of man;* and this by simply exhibiting by some, and witnessing by others, the great end which skill and enterprise are accomplishing, in the great science of human subsistence, Agriculture.

ORDER AND SYSTEM.—Order and system are essential to success in every employment, but peculiarly so, in the varied operations of farming. Without them, confusion reigns. The business of the farm is ever in such a condition that it demands attention, and thus it directs and controls, instead of being directed and controlled. But with them, "all moves on in one harmonious whole." Every thing is performed at its appointed time and in an appropriate manner, and there is leisure for information and scientific pursuits. Some farmers act under the impression that their employment is so profitless that they cannot afford to procure better farming implements and machines, and be to the expense of making improvements. Let such be assured that so long as they are possessed with this idea, so long their business will become more and more profitless.—MR. BANK's *Address*.

INFLUENCE OF MANURE.—When I visited England, six years ago, the first thing that struck me was the beauty and fertility of the soil. Every farm appears a garden. In fact, England *is* a garden. Even the sides of railroads, up to within a few feet of the iron track, are made to produce wheat, barley or potatoes. The beautiful lines of hedges, which so gladden the eye of an American, enclose no uncultivated lands. The very hill-tops are made fertile to their summits; the swamps are drained, ditched and blind ditched, and every foot of earth that the labor and ingenuity of man can render cultivatable, is made to send forth its green stalks and golden harvests.

It is important that the American, and especially the New-England farmer, should know *how* this is all done. I have dined and lived with English farmers; I have associated with them; I have frequently obtained their friendship, and sometimes their confidence; and, by hook and by crook, I have wormed this important secret out of them. I have obtained their philosopher's stone; I have got the clue to the ever-living fertility of their soil; and now, Connecticut farmers, in the fulness of my heart, which happens at this time to be overflowing with the "milk of human kindness," I will *freely*, without the hope of fee or reward, impart to you this grand *secret*. See that you improve by it. It all consists of one simple word—MANURE.—*Address of* P. T. BARNUM *before the Fairfield* (*Ct.*) *Ag. Society*.

Let every farmer gather and accumulate his weeds, muck, swamp mud, charcoal dust, coal ashes, soap suds and excrements from his horses and horned cattle, and all the liquid manures from his yard, and properly protect them from rain and snow, and he has, in one vast pile, a capital fund on which to base all his farming operations for the year. But how different from all this is the practice of many farmers! In nine cases out of ten, the liquids are permitted to run over the yard; to lose their nitrogen, which passes off in the form of ammonia; their salts, which are carried away by continual drenching and nearly every valuable property which is in any way dependent upon the atmosphere; until, in fact, every chemical ingredient, without which neither plants nor seeds can exist, is lost to all the practical purposes of farming. Such a reckless policy with regard to the enriching commodities, accounts, to a greater extent than any other cause, for the meager productions of the farm.—*Address of* MR. EAMES.

What are "Native" Cattle?

Rev. W. A. DREW in his address before the Agricultural Societies of Kennebec and Franklin counties, (Me.,) makes the following remarks:

"With regard to stock, I suppose Maine can boast of the best working oxen of any State in the Union. When Southerners, or even people from the Middle States, come here, they are surprised at the magnificence of our ox teams. And we have native cows equal to any of the royal *bloods* of England."

He then goes on to speak of the valuable properties of several "native" cows, that he has known; though he gives no particulars in regard to their products, by which we can compare them with others. The meaning of the term "native," as used in this case, is, perhaps, somewhat illustrated by the paragraph which follows next in connexion, in the same address, as follows:

"Our Kennebec valley is greatly indebted to the late lamented Dr. Vaughan, of Hallowell, for its enviable race of neat cattle. In the infancy of this county, when he first moved into it, he took great pains to import the best breeds from England; these became crossed with the native stock, and have built up some of the most magnificent oxen and the best milch cows in the country. Our State owes a lasting debt of gratitude to that great and truly good man for the fruits he introduced, and the cattle and sheep he imported, which now bless the State of which he was one of the earliest and truest friends."

Thus, the origin of the "enviable race of neat cattle," to be found in the Kennebec valley, is traced to the "best breeds from England," imported by Mr. Vaughan; crosses from which "have built up some of the most magnificent oxen and the *best milch cows* in the country"!

We heartily concur in the tribute paid the "great and truly good man," whose name is mentioned in the above quotation; but at the same time we would beg leave to correct an error. It was the late Charles Vaughan, Esq., and not Dr. Benjamin Vaughan, who imported the cattle from England. These two gentlemen, brothers, settled in Maine nearly at the same period; and both conferred important benefits on that part of the country, by their liberal efforts for the improvement of its agriculture. The importation alluded to was made in 1792. It consisted of two bulls and two cows. One of the cows, while on the passage, dropped a bull calf; and this animal, having been presented by Mr. Vaughan to the late Hon. Christopher Gore, of Massachusetts, became the foundation of what was afterwards widely known as "the Gore breed." The other stock was the foundation of the celebrated herds of the Messrs. Vaughan, and was continued by them without admixture of other blood, till 1824, when a cross was made with the imported short-horn bull Denton. For nearly forty years, bulls were annually obtained from these herds, and taken to different parts of the State; and many other bulls and cows of various breeds—such as Bakewell, or long-horn,—short-horn, of different families,—Hereford, Devon, &c.—have been introduced at various times; and unless the general character of the cattle of the State has lately undergone a great change, it is not easy to find a *good* animal for *any purpose*, that does not bear evident marks of an affinity with some of these stocks.

Report of the Commissioner of Patents.

We have before us a copy of the report from this Bureau for 1848. Like the volume from the same source for the previous year, it contains a mass of useful matter relating to the progress of the mechanic arts, and to the products and improvements of agriculture. The staple products of the United States for the year 1848, are put down as follows: wheat 126,000,000 bus.; corn 588,000,000 bus.; oats 185,000,000 bus.; potatoes 114,000,000 bus.; rye 33,000,000 bus.; buckwheat 12,500,000 bus.; barley 6,222,000 bus.; hay 15,735,000 tons; hemp 20,330 tons; cotton 1,066,000,000 pounds; tobacco 219,000,000; rice 119,000,000 pounds; sugar (produced in Louisiana) 200,000,000 pounds.

The following appropriate remarks are made in relation to the increased attention which has lately been given to the subject of agriculture:

"The world has, within comparatively a few years, learned that agriculture offers an almost illimitable field for the operations of the scientific as well as practical experimenter. Its full development seems to require the application of all the physical sciences in some form or other—in the analysis of soils; in the nature, structure and habits of plants; in the food of plants and the adaptation of soils and manures to their sustenance and growth; in the improvement of the races and kinds of animals; in the invention and improvement of useful implements and machines; and finally, in political economy, which points the agriculturist to the contemplation of his interests as they may be affected by the institutions and the legislation of governments. Viewed in this light agriculture may truly be regarded as the most important, dignified, elevated and honorable pursuit in which man can engage. The intellectual qualifications which the cultivation of the science of agriculture requires, are therefore not second in degree to those which are necessary for the pursuit of any other science. Hence the importance of study, experiment, and close observation on the part of the agriculturist. All who may be engaged in that elevating and ennobling pursuit, may not have the time nor the opportunity to become thoroughly versed in the philosophy which lies at its foundation, but, in a life devoted to its practice, the humblest will have the time and the opportunity to acquire much interesting and valuable knowledge."

The American Fruit Culturist.

Messrs. Editors—Your brief notice of this new work by Mr. Thomas, induced me to procure it; and I have been so well pleased with it, that I beg leave to call the attention of your readers to what I consider its improvements over former works of this kind. Unlike the old Fruit Culturist, which contained a separate descriptive catalogue of the great mass of kinds, the different varieties are all placed together, so as to be all embodied under a distinct classification. All confusion is prevented, by the quality of each sort being shown by the type used for the name, so that the reader has only to glance his eye over the column of names, to select what is most valuable,—what is next so, and so forth. Thus, taking the *Apple* as an example, the most highly celebrated and best, 13 in number, are in large CAPITALS—the next in celebrity and value, consisting of over 50, and nearly all first-rate fruits, are in SMALL CAPITALS—the next grade, comprising about 100, possessing good or valuable qualities, but only recommended for large collections, and including also unestablished new sorts, are in *Italics*; while the remainder, about 75, being those unworthy of cultivation, are in common Roman letters. The accuracy with which these rejected sorts have been designated, is shown by the correspondence, *without a single exception*, so far as the list goes, with the rejected list made out by the American Pomological Congress since the publication of Mr. Thomas' book.

The vast number of varieties which our nurserymen have propagated for sale, and which have thus become disseminated far and wide through the country, renders such a book particularly appropriate at the present time, serving to point out the good from the bad, and being just what the great mass of the community now wants, in reducing the list of sorts by retaining the best.

In searching for descriptions, a vast amount of labor is saved by the arrangement adopted by Mr. T. For example, suppose a young cultivator has fruited a fine new apple, but has lost the name, and which I will suppose is the Gravenstein. He perceives it is an *autumn* fruit; he therefore turns to the division appropriated to *autumn apples*. It is *sub-acid*; he turns to the class of this division containing *sub-acid* fruit. It is *striped* with red; the section of this class for striped apples is quickly examined, and all the labor saved of turning over the whole list of autumn apples in search of the names.

The same terms are used for describing the sorts as in former works, but they are made much more clear and definite to the ordinary reader, by the distinct definitions given of their exact meaning, and made quite plain by the use of cuts.

There are a number of smaller improvements of great convenience, as the adoption of English names instead of French, whenever practicable, for the best sorts—a glossary explaining terms, and others which my limits preclude noticing; besides which the book contains all the recent and important discoveries in relation to fruit culture, posted down to the present time.

Respectfully yours, R. R.

Domestic Economy, Recipes, &c.

Preserving Fruit—Bread.

EDS. CULTIVATOR—As the season has returned in which it is time to be packing away dried fruits, I am reminded of a notice in the last year's Cultivator, of a method of preserving dried fruits from the depredations of insects; which was by sprinkling them with brandy. Now, as I am decidedly opposed to laying a temptation, *even before a reptile, to drink brandy*, I will give you my method, which I have practiced with *perfect success* many years. As soon as the fruits are sufficiently dried, I spread them upon tins, and set them in an oven (hot enough to bake bread,) about two minutes,* and then pack them in *tight* papers or cloth bags, and they require no further attention if kept several years.

I noticed also that brandy would prevent bread from becoming heavy, which was made of flour from grown wheat. I think I can recommend a better specific. I have never had occasion to try the experiment myself; but a lady showed me some very light bread, which she said was made from the flour of grain that was sprouted very badly. She said, after it was risen, she made it stiff enough to mould with buckwheat flour, and though not quite as white, it must be more wholesome than that which is made light with brandy. Yours respectfully, F. S. C. *Canaan, Ct., September*, 1849.

Manufacture of Cheese.

The committee appointed by the Jefferson County Agricultural Society, to examine cheese dairies, say, in their report:—We endeavored to collect information from those best qualified to instruct, and to compare the different opinions upon the subject, and briefly point out the defects, (or the reasons for them,) which we noticed in our examinations. When a thermometer was used we found great uniformity as to the temperature at which the milk was set, as it is termed, for cheese, generally from 84 to 86°, the extremes being from 80 to 90°, and scald from 100 to 106°, and a common sized tea-cup full of salt to from twelve to fifteen pounds of cheese. But where the figures for setting, scalding, and salting were the same, we found the results widely different. The most prominent reason for this difference, in our opinion, is the length of time that the curd is scalded, and the time that it is salted; if scalded at 100° and scalded one hour, it will be as hard, and make as firm cheese—all other parts of the process being the same—as it will scalded 30 minutes, at 104, or perhaps 106°; and in salting, it requires much judgment. If the salt is put into the curd before the whey is sufficiently drained off, it will drain off with the whey, leaving a lack of salt, consequently a soft, and, to use a dairy term, the huffy cheese; and if not put in sufficiently soon, it will not be properly mixed, making it uneven or knotty. Cheese should be made pretty firm. It is now an article of export, and if made too soft is not only liable to loss in transportation, but a very smart cheese, bordering upon strong, does not suit the market, a milder article being preferred. We noticed several dairymen making mistakes in this particular—endeavoring to make their cheese quite too soft, supposing it to be more marketable.

We will only add, if your cheese is too soft, scald higher and longer, and add a little more salt, and be careful not to have too much of it run off with the whey. If hard and knotty, put in your salt sooner, almost as soon as you get it in the sink; if this does not remedy the matter, scald less.

The following is given as the method of making cheese pursued by Mr. McAllister, to whom the first premium was awarded. The committee say, the cheese was very firm and sound on the outside, but soft and rich within:

"We set our milk immediately after skimming at about 85 degrees, mix the rennet perfectly, let it stand 45 minutes, then break it up carefully and coarsely, let it stand 15 minutes, break it finer, let it stand and settle 15 minutes, and then dip off the whey, and then heat to 90 degrees; let it stand 30 minutes, dip off the whey again and then heat to 95 degrees; let it stand 30 minutes and then break the curd very fine, then heat to 100 degrees, let it stand 30 minutes and then dip the curd into the sink; salt soon while the curd is wet and warm—a tea-cup full of salt to 12 pounds of cheese—press very hard."

HAMS.—The *Southern Cultivator* notices some hams exhibited at the Georgia state fair, which were one, two, three, and four years old. The writer says:—"The owner refused to divulge his secret; but as we have fortunately become possessed of it, we here give it. Procure some good, clean hickory ashes, have them perfectly dry; draw your meat from the pickle on a dry day; sprinkle the ashes over the meat pretty thick, being careful not to knock off more salt than what must fall off; then hang up your meat as high as possible; smoke it with cool smoke, made by hickory wood; be sure to take it down before the skipper-fly makes his appearance, being generally in this climate, first of March; pack it away on a dry day in casks: 1st, a layer of hams in perfectly dry hickory ashes; 2d, a course of corn cobs, &c.; cover your cask snug and tight, and you may rest easy about your hams."

Agricultural Song.

The following was sent to the officers of the Norfolk County (Mass.) Agricultural Society, at their meeting in October last, by TRISTRAM BURGESS, Esq., of Rhode Island:

With the Pioneer Axe, what a conquest is made;
  What a field from the forest is won!
What regions, reduced from the wilderness shade,
  Are now warmed in the beams of the sun.

From the rock where our fathers in exile first landed,
  Their clearing, from river to river, has spread;
And mountains, and plains, by their sons are commanded
  Till now on the beach of Pacific they tread.

What farm for a nation to cultivate now!
  And gather the wonderful harvest it yields;
'Tis an Empire, reduced to the Sickle and Plow,
  An empire of gardens, and orchards, and fields.

The Plow and the Sickle shall shine bright in glory,
  When the Sword and the Sceptre shall crumble in rust;
And the farmer shall live, both in song and in story,
  When warriors and kings are forgotten in dust.

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* The small kinds need not stand in the oven over one minute.

Notes for the Month.

Communications have been received since our last, from F. Holbrook, S. B. Halliday, Elisha Fuller, John W. Proctor, A. G. Moody, R. R., A Young Farmer, T., H. C. W., W. C. W., L. Durand, F. S. C., J. H. W., A. Redfield, J. R. S., N. Longworth, W. S., I. Hildreth, A Subscriber, S. Spencer, S. B. Buckley.

Books, Pamphlets, &c., have been received as follows—Catalogue of Fruit Trees, &c., at Hopewell Nursery, near Fredericksburgh, Va., from H. R. Robey, proprietor—The Autographical Counterfeit Detector, a Companion to the Bank Note Reporter, published by J. Thompson, 69 Wall-street. This contains fac-simile signatures of all the Presidents and Cashiers of Banks in the Union—price 25 cents. A copy of it is sent gratis to all subscribers to the Bank Note Reporter, which is the best work of the kind which has come under our notice.

☞ We have received a communication reviewing the address of Hon. J. A. King, published in our October number. The main points objected to are, that 10 per cent. income on the agricultural capital of Queens county, is too high, and that the calculations by which this amount is shown, are erroneous. For instance, it is contended, that Mr. K's "estimate of four shillings (50 cts.) per bushel for potatoes, and $12.50 per ton for hay, may do for last year, and for Queens county, in its particular location; but half that sum would have to apply to most years and most sections of the country. That deduction alone, would reduce the estimated net income of Queens county, nearly one half. In addition to that, the estimate that the value of the straw was one half that of the grain, must have been four fold too high, even for Queens county." It seems to us that the writer of the foregoing remarks loses sight of the fact that Mr. K's estimates were for Queens county alone, with no reference to other sections. His object was to show the income from capital invested in agriculture in a particular district, and hence the articles were estimated at their local value. The prices of potatoes, hay, and straw, are of course high, when compared with those obtained in districts remote from market; but for the neighborhood of New-York, we should not deem them over-rated.

☞ The paragraph in our last No., p. 341, attributing certain "stereotyped errors," to the American Agriculturist, was probably, so far as the source of the errors was alluded to, wrong. Most likely the writer saw them in some stray article, erroneously credited to that journal. He would not, we are certain, intentionally have misrepresented the matter.

Transmutation.—If our correspondent at Johnstown, N. Y., who signs himself "A Subscriber," will show us "heads of chess growing on wheat stems, with wheat blades," as he alleges he has seen, we will acknowledge that he has made out a case of transmutation. But it is this very statement that we utterly repudiate—disbelieve. We did not suppose that he meant to be understood in his former communication, (Oct. No., p. 318,) as asserting that chess actually grew on wheat stalks. If such *is* the case, the question is easily settled—only produce the wheat stalks with heads of chess growing on them, and all must admit the doctrine is proved conclusively. But so far as our knowledge extends, and we have been engaged in examining the matter for about 20 years, no such thing has ever been produced, nor do we suppose it ever will be. That our correspondent honestly believes that, in the case to which he alluded, such was the fact, we do not doubt; but it must be remembered that it occurred "many years since, when he was yet a boy." He then received an impression which has rested upon his mind till the present time; but we cannot take for "a fact as clear as our existence," the impressions of boyhood, especially when they contradict the well-known and established laws by which every grain, as we are assured by inspiration, is made to produce its like. "Do men gather grapes of thorns, or figs of thistles?"

National Board of Agriculture.—In another part of this number, will be found an article on this subject from the pen of our esteemed correspondent Hon. F. Holbrook, to which we invite particular attention. The establishment of such a Board, was contemplated by some of the founders of the General Government, and we are not aware that any serious objection has ever been made to the measure on constitutional grounds. We think there is every reason to believe that a Department of this character, properly conducted, would be the means of advancing agriculture in a great degree, and of indirectly benefitting all the interests of the country. In the statesman-like document to which we are happy to give publicity, the various arguments which bear on the subject are ably set forth.

Indian Corn and Meal.—Indian corn will always be an important product of this country. A large proportion of the most fertile lands in the Mississippi valley are much better adapted to the production of this grain than any other, and the quantity which that region is capable of producing, is incalculable. The main part of the crop will, probably, for many years, as now, be converted into beef and pork; but with the improvements which have been made in drying the grain—particularly by Stafford's steam apparatus—we think there is a fair prospect that it may become a permanent article of export. Experience has now demonstrated the practicability of delivering grain and meal prepared by this mode, in good order, in any port in the world; and as the crop is not grown in Britain, except to a very limited extent, nor in any part of Europe for extensive exportation, there is no reason why we may not supply the English markets with large quantities of the meal, when the people have found out its excellence as food for man and beast.

We have before us a statement of the comparative amounts of Indian corn, which arrived at different points of tide water during a part of the years 1848 and 1849. It appears that from the first of May to the 22d of August, this year, there arrived at Albany 3,643,708 bushels of corn, against 1,371,863 bushels of the previous year; that the exports from New-Orleans to August 11th, this year, were 1,455,306 sacks, being an increase 244,105 sacks over the same period last year. We shall endeavor to furnish an exhibit of the amount sent out of the country for the two last years.

Agriculture in New-Brunswick.—Mr. J. H. Reid, of Fredericton, N. B., writes—"Our show came off on the 4th October, and was the best ever held in the province. Our grains astonished the Old-Country people—wheat weighing 68 lbs. per bushel, barley 59 lbs., oats 45 lbs. Mr. Watts had a squash weighing 177 lbs. The horse show was not good; the good cattle were in few hands; my sheep were the only good stock of that kind; the pigs made a good show; and there was a good exhibition of manufactures. We are steadily advancing in the good cause. I got a resolution passed, ordering a copy of *The Cultivator* for every member of the Society. I am getting one ram and two ewes from Mr. Large, of Gloucestershire, England, the celebrated breeder of the Improved Cotswolds, or New Oxfordshires. The ram cost £60, and the ewes £10 each."

Broom Corn.—The Ohio Statesman says, that

Charles Eaton and Brothers have had 700 acres of land planted in broom corn the present season, 450 acres of which were rented at $5 an acre. Much of this land has been devoted to broom corn for five years in succession. The crop, after being cured, is sent chiefly to New-York.

Crops in North-Carolina.—Mr. S J. **Wheeler**, of Murfreesboro, writes—" Corn and pea crops are very good all through the eastern counties of our State; indeed I never saw heavier crops on the Roanoke, than I have seen during the past month."

The last Wheat Crop in Northwestern Ohio.—Mr. S. H. **Arnold**, of Seneca county, writes—" Wheat the present year is poor in quantity and quality; the injury being caused by the ' wheat midge ' and rust. This county will not average half the usual yield. The fall-sown wheat looks well."

Starch from Indian Corn.—The Ohio Statesman informs us that large quantities of starch are made from this grain in that State. An establishment near Columbus is said to use 20,000 bushels of corn annually for this purpose. No attention is now paid to the color of the corn, as by the improved modes of manufacturing, as light-colored starch is produced from the dark-colored varieties, as from white. The quality of the starch here made is said to be superior, commanding a higher price in New-York and New-Orleans than that made from wheat. The offal of the grain is fed to hogs, and at the manufactory alluded to, 500 to 600 head are annually fattened.

Peat Charcoal.—Sometime since, we mentioned that extensive experiments were going on in England and Ireland, with peat charcoal as a deodorizer or disinfectant. By late accounts we learn that it has been successfully used for the purpose of rendering the contents of privies inodorous, and thus bringing them into a portable condition. It is thought that the substance will be brought into general use in large towns and cities, and that it will be of great utility, not only in an agricultural, but in a sanitory view. Mr. **Rogers**, who first brought the substance to notice for this purpose, gives some important results in regard to the application of peat charcoal in preventing the escape of odors from sewers, cess-pools, &c. He states that instead of removing the contents of such receptacles in warm weather, it is only necessary to cover the surface with two or three inches of the peat charcoal. Several experiments are cited where this had been done, and no odor arose for several months.

Potato Disease not caused by Insects.—Mr. **Curtis**, a distinguished English entomologist, has just published a volume in reference to insects which attack the potato. Speaking of the malady which has prevailed so extensively in potatoes for several years, he remarks—" Amongst the numerous causes which have been assigned for the appearance of this alarming and severe visitation, insects have been frequently taxed as the destructive agents; but I am convinced the calamity is not to be attributed to their presence." He admits that there are many species of insects which prey upon the potato in its various stages; but he thinks there is no evidence that their attacks are in any way connected with what is called the potato disease.

Cellars for Manure.—The claimants for the premiums on farms, offered by the Middlesex (Mass.) Agricultural Society, generally speak highly of the advantages of keeping manure in cellars. R. Chaffin states that he considers one load of manure composted in the cellar under his barn, worth three which have been exposed to the action of frost, rain, evaporation, &c. His cellar is closed, excluding the frost and rain altogether. His cows are kept in the barn, nights, all the year; their manure goes into the cellar, where hogs are kept to root over the different materials, and mix them into a compost.

Protection of Crops.—In many parts of the country, the grain-fields of the farmer suffer serious damage from the depredations of wild birds and animals. The common wild pigeon often does great injury by pulling up spring grain, especially Indian corn, near where their roosts or breeding places are established. They go in flocks, and destroy a field of many acres in a few minutes. Various means have been adopted to keep off the birds, such as placing images and other objects in the field, with but little advantage. It has been suggested that hawks might be trained in such a way as to prevent pigeons from lighting on grain-fields. In the days of falconry, several species of hawks were trained for the pursuit of game. We have one or more species in this country, which naturally prey on pigeons to a considerable extent. The pigeon-hawk, (*Falco columbarius*,) is an object of perfect terror to the pigeon. Whether it could be trained to answer the purpose suggested is doubtful; but from the great dread manifested towards it by the pigeon, it might be sufficient to confine the hawk in some conspicuous situation in the field.

Ohio Mineral Paint.—We have received a pamphlet giving an account of the discovery of this article, and describing its properties and mode of application. The history of its discovery is as follows:

About two years ago, near the town of Akron, Ohio, a singular substance was discovered at the bottom of a brook, resembling in its character and appearance, flakes of the purest indigo, and of the consistency of hard clay or cold tallow. This was at first regarded with but little interest, until some individuals, attracted by its singular qualities and appearance, were induced to make some experiments with it. Subsequent to this, however, it was also found to exist in greater quantities at some considerable depth from the surface of the earth, and on being taken from the mine and exposed to the atmosphere, it became completely indurated, resembling slate, or lumps of anthracite coal. This was finally ground, and mixed with linseed oil, and applied as a paint, and it gradually hardened until it changed to stone, perfectly protecting any substance it covered, from air, moisture and fire.

It is said to be susceptible of being made of various shades of color, from a cream and fawn to a blue, dark brown and black; that it readily mixes with the drying oils, and requires no particular skill in the mode of preparation, and is recommended as more economical than other paints. The composition of the original substance is given as follows:

Magnesia,..........................	28	per cent.
Alumina,..........................	26	" "
Silex,..........................	15	" "
Oxide of Iron,..........................	11	" "
Sulphate of Iron,..........................	9	" "
Lime,..........................	8	" "
Carbon,..........................	3	" "
	100	

W. H. **Starr**, 67 Beekman-street, New-York, is agent for this paint.

Cultivation of Cranberries.—**Sylvester Reeves**, of Wayland, Mass., states to the officers of the Middlesex County Agricultural Society, that he has made an experiment in regard to the cultivation of cranberries. In 1841 he commenced setting out vines on a sandy loam, near a stream, which was liable to overflow its banks during freshets. The soil had been once plowed several years before, and the surface left very uneven, and so left to become swarded over. The cranberry vines were set out in sods of ten inches square, the sod of the ground to be planted having been previously removed, in corresponding squares—the distances being 18 to 24 inches. These vines grew thriftily, at first, but failed in dry weather.

He made another trial in 1845, by removing the soil to the depth of six to eighteen inches, reducing the surface to a more uniform level, placing the vines out in the sub-soil in the same manner, and of the same dimensions as in 1841. These vines covered the ground the third year, where the sub-soil was mellow and loose, without any farther labor; but where the soil was hard and mixed with small lumps of iron ore, their growth was more retarded.

In 1848, he selected the most productive part of the ground, raked and measured four bushels, from 4 square rods. The drouth of the past season, and a frost of the 16th of July, reduced the yield of the crop. The ground can be flowed winter and spring.

Answers to Correspondents.

Ringbone.—*A Young Farmer.* Youatt says—"Ringbone is one of the most serious lamenesses with which the horse can be afflicted. In its early stage, or when recognized only by a bony enlargement on both sides of the pastern-joint, or in some few cases on one side only, the lameness is not very considerable, and it is not impossible to remove the disease by active blistering or the application of the cautery; but there is so much wear and tear in this part of the animal, that the inflammation and the disposition to the formation of bone rapidly spread; and when the bony deposit begins to spread, the disease is incurable." We know nothing of ringbone being "fed by a bladder, situated in the heel, or posterior part of the foot."

Flax.—We know nothing, personally, of the success of flax on reclaimed bogs; but have been told that it does well in Ireland in such situations.

Insect in Wheat.—T., Hulmeville, Pa. The insect alluded to in the extract you send, is not described with sufficient accuracy to enable us to identify it. The color and size of the larva correspond to the larva of the wheat midge, *Cecidomyia tritici;* for a description of which see Cultivator for 1844, page 243, and current volume, page 256. Dr. Harris describes *two* grain moths—*Tinea granella*, and the Angumois moth, *Anacampsis cerealella*. A moth closely allied to the latter, if it is not in fact the same, called in some sections the "flying weevil," is described by Mr. Owen in the Cultivator for 1846, page 208 to 212, and 344. Your insect does not appear to be either of these; we think it more probable that it is the wheat midge, above mentioned, which is erroneously called "weevil" in the northern States. The larva, however, does not eat into the grain. It is a simple maggot and does injury only while the grain is in a soft or immature state, by absorbing the juices.

Muck and Clay.—A. R., Delhi, N. Y. From the description of your soils, it is impossible to give minute directions in regard to the application of muck and clay. As a general rule, the clay will do most good on the most gravelly or sandy soils, and the muck on those which have least vegetable matter. The muck is better when composted with animal manure—ashes are better than lime to mix with it. If it is to be used alone, next spring, it is better to be drawn out this fall, and left in small heaps, that the frost and air may dispel the acids. (See Cult. for 1847, pages 297, 298.

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